

# INDEX OF AUTHORS' NAMES.

## ABSTRACTS. 1890.

And also to Transactions, 1890 (marked TRANS.); and to such papers as appeared in the Proceedings during the Session 1889—1890 (Nos. 72 to 86; Nov., 1889, to July, 1890), but not in Transactions (marked PROC.).

### A.

- Abegg, R., amidochrysene, 789.  
 Abel, J. J., animal melanins and hæmosiderin, 1452.  
 — molecular weights of cholic acid, cholesterin, and hydrobilirubin, 914.  
 Abenius, P. W., lactones derived from glycins, 245.  
 — paradiazine derivatives, 268, 525.  
 Abney, W. de W., and G. S. Edwards, effect of the spectrum on the haloïd salts of silver, 933.  
 Ach, F., phenylhydrazonolevulinic anhydride, 70.  
 Ach, F. See also Fischer.  
 Acqua, G., calcium oxalate crystals, 1182.  
 Acton, E. H., assimilation of carbon from organic compounds by green plants, 818, 1021.  
 Adams, M. A., new form of air bath, 546.  
 Adie, R. H., sulphates of antimony, TRANS., 540.  
 Ahrens, F. B., crystalline veratrine, 1448.  
 — rhombic sulphur from hydrogen sulphide, 1371.  
 Aignan, A., adulteration of French essence of turpentine, 422.  
 — adulteration of linseed oil, 1198.  
 Aldringen, F., thiocoumarins and their behaviour towards hydroxylamine and phenylhydrazine, 624.  
 Alechin, A., melezitose, 733.  
 Alexander, H., attempts to synthesise conhydrine, 1447.  
 — phenymalic acids, 1135.  
 Alexéeff, P., azocumic chloride, 891.  
 Alexéeff, P., and E. Werner, thermochemical influence of certain groups on the value of the hydroxyl and carboxyl groups in the aromatic series, 439.  
 Allen, A. H., analytical examination of water for technical purposes, 298.  
 Allen, E. W., and B. Tollens, xylose and wood gum from straw, &c., 472.  
 Alt, H., estimation of thiocyanates, 424.  
 — precipitation of manganese as peroxide, 419.  
 Alt, H., and J. Schulze, separation of zinc from nickel, 418.  
 Amagat, E. H., and F. Jean, optical examination of oils and fats, 91.  
 Amat, L., lead phosphites and pyrophosphite, 945.  
 — sodium phosphite and pyrophosphite, 438.  
 Andeer, J., action of resorcinol on egg albumin, 804.  
 Anderlini, F., action of methyl iodide on pentamethyldihydropyridine, 1431.  
 — action of methyl iodide on tetramethyldihydropyridine, 67.  
 — derivatives of cantharidin, 640.  
 — derivatives of dihydropyrroline, 65, 1430.  
 — nitropyrroline- $\alpha$ -carboxylic acids, 66.  
 — pyroglutamic acid, 642.  
 Anderlini, F. See also Ciamician.  
 Anderson, W. S., solubility of calcium carbonate in fresh and sea water, 450.  
 André. See Berthelot.  
 Andreocci, A., action of phenylhydrazine on acetylurethane, 889.  
 Andres, H., Russian oil of peppermint, 1428.  
 Andrews, C. W., influence of tempera-

- ture on the specific rotation of cane sugar, 579.
- Andrews, L. W., volumetric estimation of combined sulphuric acid, 414.
- Andrews, T., electrochemical effects on magnetising iron, 678.
- Angeli, A., action of ethyl oxalate on pyrrol methyl ketone, 1156, 1243.
- condensation products of  $\alpha$ -acetylpyrroline with benzile, 1000.
- dimethylethylenediamine, 954.
- diphenylacetylenediureine and some of its derivatives, 1290.
- Ankersmit, H. J. See Pictet.
- Anschütz, R., acetyltrichlorophenomallic acid, 365.
- alkyl hydrogen oxalates, dichloroglycolates, and chloroxalates: tetralkyl oxalates, 235.
- can Raoult's method distinguish between atomic and molecular union, 105.
- cyanogen monosulphhydrate, 351.
- formation of hydantoin, 365.
- lactam-formation in the fatty series. Identity of citraconanil and pyranilpyrrolactone, 774.
- isomerism of maleic and fumaric acids, 363.
- Anschütz, R., and C. Bennert, monosubstituted succinic acids, 363.
- Anschütz, R., and W. O. Emery, action of phosphorus trichloride on phenol, 34.
- action of phosphorus trichloride on salicylic acid, 53.
- Anschütz, R., and N. P. Evans, vapour density of antimony pentachloride, 16.
- Anschütz, R., and A. R. Haslam, action of phosphorus pentachloride on chloralide. Tetrachlorethylidene trichlorolactate, 27.
- Anschutz, R., F. Reuter, and O. Scharfenberg, action of aniline on citraconic acid and on itaconic acid, 368.
- Antony, W., and A. Lucchesi, composition of some metallic sulphides obtained in the wet way and reactions of the sulphide of gold,  $Au_2S_3$ , 1216.
- Arachequesne, G., estimation of acetone as iodoform, 837.
- Araki, T., methæmoglobin and sulphur-methæmoglobin, 1012.
- Arata, P. N., and F. Canzoneri, bark of *Quina morada* (*Pogonopus febrifugus*), 404.
- true winter bark, 405.
- Arbenz, C., constitution of isoeuxanthone, 53.
- Arbenz, C., phenylsalicylic acid, 892.
- Archbutt, L., estimation of sulphur in iron and steel, 1463.
- Armstrong, H. E., oxidation of turpentine in sunlight, *Proc.*, 1890, 99.
- structure of cycloid hydrocarbons, *Proc.*, 1890, 101.
- terminology of hydrolysis, especially as affected by ferments, *Trans.*, 528.
- Armstrong, H. E., and W. P. Wynne, action of potash on naphthalene-1:3-disulphonic acid, *Proc.*, 1890, 136.
- chlorides of naphthalene and its derivatives, and the manner in which they are decomposed by alkalis, *Proc.*, 1890, 85.
- comparative influence exerted by the radicals Cl, OH, and  $NH_2$  in naphthalene-derivatives on the formation of sulphonic acids, *Proc.*, 1890, 133.
- constitution of the tri-derivatives of naphthalene. No. 1. The constitution of  $\beta$ -naphthol- and  $\beta$ -naphthylamine-sulphonic acids R and G. Naphthalenemetadisulphonic acid, *Proc.*, 1890, 11.
- constitution of tri-derivatives of naphthalene. No. 2.  $\alpha$ -Amido-1-3'-naphthalenedisulphonic acid, *Proc.*, 1890, 15.
- constitution of tri-derivatives of naphthalene. No. 3.  $\alpha$ -Naphthylaminedisulphonic acid Dahl No. III. The constitution of naphthol yellow S, *Proc.*, 1890, 16.
- constitution of tri-derivatives of naphthalene. No. 4. Constitution of  $\alpha$ -naphthylaminedisulphonic acid Dahl No. II. Naphthalene-1:2'-disulphonic acid, *Proc.*, 1890, 125.
- constitution of tri-derivatives of naphthalene. No. 5. Constitution of the Schöllkopf  $\alpha$ -naphthylaminedisulphonic acid, *Proc.*, 1890, 126.
- constitution of tri-derivatives of naphthalene. No. 6. Constitution of Cassella's  $\beta$ -naphthylamine- $\delta$ -disulphonic acid, *Proc.*, 1890, 127.
- constitution of tri-derivatives of naphthalene. No. 7. Disulphonic acids obtained by sulphonating the isomeric heteronuclear  $\beta$ -naphthylaminedisulphonic acids, *Proc.*, 1890, 128.
- constitution of tri-derivatives of naphthalene. No. 8.  $\beta$ -Chloronaphthalenedisulphonic acids, *Proc.*, 1890, 131.

Armstrong, H. E., and W. P. Wynne, homonuclear trichloronaphthalenes, *Proc.*, **1890**, 76.

— isomeric change in the naphthalene series. No. 6. The influence of position in determining the nature of isomeric change in the case of the chloronaphthalenesulphonic acids, *Proc.*, **1890**, 86.

— the ten isomeric dichloronaphthalenes and the sulphonic acids and trichloronaphthalenes derived therefrom, *Proc.*, **1890**, 77.

Arnaud, A., carotene in leaves, 285.

— crystallised digitalin, 65.

— digitalin and tanghinin, 171.

Arnschink, L., absorption of different fats from the alimentary canal, 811.

Arrhenius, S., conditions of equilibrium between electrolytes, 437.

Arth, G., estimation of phosphoric acid in slags. Formation of tetrahydrated ferric phosphate, 292.

Aschan, O., acids poor in carbon obtained from Baku petroleum, 737.

— atomic rearrangement of allyl compounds, 1084.

— constitution of  $\alpha$ -dibromhydrin, 1083.

— oxanilic acid, 1124.

Aschoff, C., importance of chlorine in the plant, 1182.

Ashdown, H. H., reducing substances in urine, 279.

Aslanoglou, P. L., ammonia in burnt magnesium, 1209.

— electrolysis of various substances, 1203.

Astre, C., bismuth potassium iodides, 1067.

Astre, L., new bismuth potassium iodide, 708.

Aubin, E., and J. Quenot, estimation of the total nitrogen in manures, 921.

Augé, E., sodium alum, 1059.

Auger, V., and A. Béhal, preparation of acetic chloride and of chloroacetic acid, 234.

Auger, V. See also Béhal.

Auriol, H., and D. Monnier, estimation of casein, 312.

Autenrieth, W., thio-derivatives of the crotonic acids, 361.

Auwers, K., paratolylphenylketoxime, 503.

Auwers, K., and L. L. Jackson, determination of the structure of aliphatic acids, 1098.

Auwers, K., and V. Meyer, anhydride formation in acids of the succinic series, 479.

Auwers, K., and V. Meyer, dicarboxylic acids,  $C_6H_{11}O_4$ , 132.

— isomeric oximes of unsymmetrical ketones and the configuration of hydroxylamine, 1263.

— oximes of halogen benzenophenones, 1144.

— stereochemistry of ethane derivatives, 1083.

— tetramethylsuccinic acid and trimethylglutaric acid, 479.

## B.

Baas, H. K. L., decomposition of ethereal salts in the alimentary canal, 1013.

Babés, A., colouring matters, and aromatic products from the *Bacillus pyocyaneus*, 189.

Bach, C., benzyloxanthranol, 1144, 1425.

Bäckström, H. See Brögger.

Baessler, P., estimation of fat in poppy cake, 306.

— yields and composition of a variety of red clover, 1183.

Baeyer, A. v., constitution of benzene: reduction products of phthalic acid, 1275.

Baeyer, A., and J. Herb, reduction products of terephthalic acid, 1130.

Baeyer, A., and R. Löhr, paramidotriphenylcarbinol, 1141.

Baeyer, A., and H. Rupe, reduction products of dichloromuconic acid, 875.

Bailey, G. H., atomic weight of zirconium, 705.

— estimation and occurrence of sulphur in coal, 414.

Bailey, G. H., and W. B. Hopkins, behaviour of copper oxide at high temperatures, *Trans.*, 269.

Bailhache and Commelin, specific gravity apparatus, 206.

Baille, J. B., and C. Féry, aluminium amalgam, 110.

Balbiano, L., action of acid chlorides on 1-phenylpyrazole, 798.

— brominated derivatives of 1-phenylpyrazole, 797.

— derivatives of 1-phenylpyrazole, 1164.

— synthesis of pyrazole, 1009.

— the pyrazole group. Derivatives of trimethylenephenyldiamine, 1244.

— two pyrazolebenzoic acids, 799.

Ballario and Revelli, estimation of the principal constituents of cow's milk, 1472.

- Bamberger, E., camphoric acid, 517.  
 — contributions to the theory of six membered "rings," 1299.  
 — decomposition of ac- 1 : 4'-tetrahydronaphthylenediamine into its optically active components, 511.  
 — synthesis of ammeline and cyanuric acid, 1082.  
 Bamberger, E., and F. Bordt, ar-tetrahydro- $\alpha$ -naphthol, 508.  
 Bamberger, E., and C. Burgdorf, amidochrysene, 902.  
 — chrysene, 1312.  
 Bamberger, E., and M. Kitchelt, reduction of naphthalene and anthracene, 1146.  
 — ar-tetrahydro- $\beta$ -naphthol, 627.  
 — ac- and ar-tetrahydro- $\beta$ -naphthylamine, 631.  
 Bamberger, E., and F. Lengfeld, characteristics of the hydrogenation process, 1304.  
 — reduction products of quino-line, 1318.  
 Bamberger, E., and W. Lodter, action of carbon bisulphide on menthol and borneol, 517.  
 — ac-tetrahydro- $\beta$ -naphthol and secondary closed chain alcohols, 506.  
 Bamberger, E., and L. Strasser, fichtelite, 384.  
 Bamberger, M., analysis of resins and balsams, 1032.  
 Bamberger, M. See also Benedikt.  
 Bancroft, W. D. See Jackson.  
 Barbier, P., and L. Roux, dispersive power of acids of the acetic series, 1353.  
 — dispersive power of aqueous solutions, 673.  
 — dispersive power of carbon compounds: alcohols of the fatty series, 1034.  
 — ditto, ditto: ethers, 1353.  
 Baringer, W.,  $\psi$ -selenocarbamides, 880.  
 Barral. See Lepine.  
 Barré. See Grimbart.  
 Barus, C., relation of volume, pressure, and temperature in the case of liquids, 321.  
 Bassett, H., interaction of iodine, water, and potassium chlorate, TRANS., 760.  
 Baumann, E., action of hydrogen sulphide on aldehydes, 1092.  
 — thioaldehydes, 477.  
 Baumann, E., and R. Camps, thioaldehydes, 478.  
 Baumann, E., and E. Fromm, thio-derivatives of ketones, 26.  
 Baumann, E., and E. Fromm, thioaldehydes, 25.  
 Baur, A., artificial musk, 1401.  
 Bayrac, estimation of uric acid in urine by means of sodium hypobromite, 670.  
 Bechhold, J., carbazoledisulphonic acid, 1297.  
 — chemical energy at the surface of liquids, 328.  
 Bechi, E., boric acid in plants, 656.  
 Beck, C. R. See Tilden.  
 Becker, A., two analyses of mica, 220.  
 Becker, G. F., silicic acids, 342.  
 Beckmann, E., determination of the molecular weight from vapour pressure, 323.  
 — isomerism of the aldoximes, 1121.  
 — molecular weights of dissolved iodine, phosphorus, and sulphur, 447.  
 Beckurts, H., brucine, 1330.  
 — ferrocyanides of the alkaloïds, 1318.  
 — strychnine, 1328.  
 Béhal, A., and V. Auger, action of ethylmalonic chloride on ethylbenzene, 493.  
 — new class of diketones, 388.  
 Béhal, A., and Choay, action of heat on chloralammonia, 230.  
 — chloralimide and its isomeride, 1093.  
 Béhal, A. See also Auger.  
 Behrend, P., and H. Kast, titration of small quantities of gases in mixtures, 290.  
 Behrend, R., alkyl derivatives of methyluracil and nitrouracil, 31.  
 — stereochemistry of nitrogenous compounds, 575.  
 Behrend, R. and P. Ernert, condensation of carbamide with ethyl acetate, 1240.  
 — diazouracilcarboxylic acid and its derivatives, 1240.  
 Behrend, R., and E. König, a dimolecular isomeride of benzaldoxime, 1122.  
 — two different modifications of paranitrobenzylisobenzaldoxime, 1412.  
 Beilstein, F., and O. v. Blaesé, estimation of antimony, 830.  
 Beilstein, F., and T. Grosset, analysis of aluminium sulphate, 85.  
 Bein, S., detection of the colouring matter of the yolk of egg, 840.  
 — exact method for the estimation of egg substance, 840.  
 Beketoff, N., combining energy of rubidium, 108.  
 — heat of combustion of rubidium, 679.  
 Bel. See Le Bel.

- Belar, A., aurichalite, 218.
- Bell, J. C., estimation of iron in water, 419.
- Bemmelen. See Van Bemelen.
- Bender, C., refractive indices of normal salt solutions, 549.
- Benecke, F., detection of rye-meal in wheat-meal and bran, 302.
- Benedikt, R., Schmidt's process for the conversion of oleic acid into solid fatty acids, 863.
- Benedikt, R., and M. Bamberger, quantitative reaction of lignin, 1474.
- Benedikt, R., and A. Grüssner, analysis of essential oils, 423.
- estimation of methoxyl, 299.
- Bennert, C. See Anschütz.
- Bentley, W. B., and W. H. Warren, nitro-derivatives of metabromotoluene, 485.
- Berchem. See Van Berchem.
- Berg, A., chloramylamines, 952.
- chromiodes, 1378.
- Bergami, O. See Liebermann.
- Bernthsen, A.,  $\alpha$ -naphthylamine- and  $\alpha$ -naphthol- $\epsilon$ -disulphonic acid, 386.
- Berthelot, condensation of carbonic oxide and the drying of gases, 692.
- condensation of carbonic oxide and the penetrability of glass by water, 691.
- equilibrium and reciprocal displacements between volatile organic bases, 1362.
- formation of nitrates in plants, 543.
- heat developed by the action of oxygen on the blood, 274.
- heat of transformation of isomeric inosites, 1041.
- melitose, 356.
- preparation of nitrogen, 330.
- raffinose, 21.
- reciprocal displacement of oxygen and the halogens, 6.
- reduction of alkaline sulphates by hydrogen and by carbon, 1053.
- stability of salts alone and in presence of water, 1361.
- the marsh gas fermentation, 855.
- vegetable soils and atmospheric ammonia, 822.
- Berthelot and André, heats of combustion and formation of nitrogenous compounds derived from albuminoids, 936.
- heats of combustion of the chief nitrogenous compounds in living organisms, 937.
- thermochemistry of hydroxylamine, 934.
- Berthelot, André, and Matignon, oxidation of the sulphur in carbon compounds, 1462.
- Berthelot and Engel, allotropic forms of arsenic, 679.
- Berthelot and Fogh, heats of formation of amides, 1359.
- Berthelot and Friedel, meteoric iron from Magura, Hungary, 1384.
- Berthelot and Matignon, heats of combustion of sulphur compounds, 1361.
- heats of formation of sugars, 1360.
- Berthelot and P. Petit, animal heat and the heat of formation and combustion of urea, 206, 275.
- different forms of graphitic carbon and their derivatives, 448.
- Berthelot, D., electrical conductivity and multiple affinities of aspartic acid, 204.
- electrical conductivity as a means of investigating the interaction of acids of complex function, 204.
- electrical conductivity of phenols and hydroxybenzoic acids, 677.
- electrical conductivity of the ammonium and aniline salts of hydroxybenzoic acids, 1039.
- Bertoni, G., ethereal salts of nitrous acid, 353.
- Bertram, A., monophenylthiocarbamide and imidothiocarbamates, 1291.
- Besson, A., combination of ammonium and hydrogen phosphide with silicon chloride and silicon bromide, 559.
- combination of hydrogen phosphide and ammonia with boron chloride and silicon sesquichloride, 690.
- combination of hydrogen phosphide with boron fluoride and silicon fluoride, 448.
- freezing points of arsenic chloride and stannic chloride, 331.
- interaction of ammonia and hydrogen phosphide with the haloïd compounds of arsenic, 1052.
- phosphonium sulphate, 9.
- Best, T. T., methylorthanisidine, 607.
- Bethmann, H. G., affinity constants of organic acids, 1209.
- Bettendorff, A., earths of the cerium and yttrium groups, 851.
- Bevan, E. J. See Cross.
- Beythien, K., E. Parcus, and B. Tollens, formation of lactic acid from raffinose and from cane-sugar: raffinose not formed from cane-sugar by the action of lime or strontia, 582.
- lactic acid from molasses, 583.
- Beythien, K., and B. Tollens, behaviour of inverted raffinose with phenylhydrazine, 581.

- Beythien, K., and B. Tollens, compounds of raffinose with bases, 580.  
 ——— melting points and preparation of osazones, 581.
- Bidet, A., alteration of compounds of the benzene series when exposed to air and light, 1401.
- Biedermann, J., glutarenediamidoxime and its derivatives, 126.  
 ——— quinolineparamethenylamidoxime and its derivatives, 175.
- Bieler, K., and B. Tollens, fucosol, 238, 1105.
- Biginelli, P., action of ethyl acetate on cinnamaldehyde, 768.  
 ——— action of ethyl acetoacetate on dextrose in presence of alcoholic ammonia, 732.
- Bindel, K., specific gravity, specific heat, and heat of dissolution of supersaturated salt solutions, 1042.
- Bischler, A., orthonitrophenylhydrazine, 148.
- Bischler, A., and S. Brodsky, metanitrophenylhydrazine and parabrom-orthonitrophenylhydrazine, 150.
- Bischoff, C. A., action of methyl chloride on naphthalene: Constitution of hydrocarbons obtained from carminic acid, 1145.  
 ——— azo-colours from  $\alpha$ -naphthylamine, dimethylaniline, and  $\alpha$ -hydroxynaphthoic acid, 1148.  
 ——— brominated pyrotartaric acids, 1097.  
 ——— limitation of the free rotation of singly bound carbon atoms, 723.  
 ——— preparation of mono-, di-, and tri-substituted succinic acids from ethyl malonate, 742.  
 ——— stereochemical studies in the piperazine group, 1331.  
 ——— stereochemistry of nitrogen, 1330.  
 ——— substituted succinic acids, 237.  
 ——— synthesis of mesaconic and citraconic acids from ethyl propenyltricarboxylate, 1101.  
 ——— theory of anhydride formation in the case of acids of the succinic series, 741.  
 ——— trimethylsuccinic acid and dimethylglutaric acid, 1099.
- Bischoff, C. A., and A. Hausdörfer, derivatives of  $\alpha$ - and  $\beta$ -naphthylglycin, 1309.  
 ——— derivatives of orthotolylglycin, 1285.  
 ——— derivatives of paratolylglycin, 1284.
- Bischoff, C. A., and A. Hausdörfer, diphenyl  $\alpha\gamma$ - and  $\alpha\delta$ -diketopiperazine, 1332.
- Bischoff, C. A., and A. Hausdorfer, distillation products of citrates, 1102.  
 ——— ortho- and para-ditolylpiperazine and  $\beta$ -dinaphthylpiperazine, 1333.
- Bischoff, C. A., and A. v. Kuhlberg, attempts to prepare alkyl-substituted tricarballic acids, 747.  
 ——— benzylmethylsuccinic acid and benzyl dimethylsuccinic acid, 1134.  
 ——— methylsuccinic, ethylsuccinic, and unsymmetrical dimethylsuccinic acids, 742.
- Bischoff, C. A., and N. Mintz, anhydride formation and intramolecular change of substituted succinic acids, 744.  
 ——— benzylsuccinic acid and its homologues, 774.  
 ——— symmetrical ethylmethylsuccinic, trimethylsuccinic, symmetrical and unsymmetrical diethylsuccinic and ethyl dimethylsuccinic acids, 743.
- Bischoff, C. A., and O. Nastvogel, action of acetic anhydride on the anilides, toluidides, and naphthalides of malic acid, 1162.  
 ——— action of chloroacetic acid and oxalic acid on ethyleneorthoditolyl diamine, 1161.  
 ——— action of chloroacetic acid and oxalic acid on ethyleneparaditolyl- and ethylene- $\alpha$ -dinaphthyl-diamine, 1162.  
 ——— anilides and toluides of tartaric acid, 1112.  
 ——— attempts to prepare aromatic tetra- and tri-ketopiperazines, 1164.  
 ——— attempts to prepare closed chains containing 2 nitrogen atoms and 2, 3, and 6 carbon atoms, 1164.  
 ——— diphenylketopiperazine and diphenyl- $\alpha\beta$ -diketopiperazine, 1160.  
 ——— distillation of rosin in a vacuum, 1154.
- Bischoff, C. A., A. Sienecki, and H. Brodsky, sulphonation of aniline and naphthylamine with potassium hydrogen sulphate, 1149.
- Bischoff, C. A., and C. Trapezon-janz, diphenylpiperazine, 1332.
- Bischoff, C. A., and A. Tigerstedt, action of ethyl  $\alpha$ -bromisobutyrate on ethyl propylmalonate and isopropylmalonate, 1103.
- Bischoff, C. A., and E. Voit, relation of the two symmetrical dimethylsuccinic acids to pyrocinchonic acid, 743.  
 ——— the two symmetrical dimethylsuccinic acids, 743.
- Bischoff, C. A., and P. Walden, conductivity of the substituted succinic and glutaric acids, 1038.

- Bischoff, C. A., and P. Walden, physical constants of alkyl derivatives of ethyl ethenyltricarboxylate, 745.
- Bishop, W., oil of sesame, 90.
- Bistrzycki, A., action of ortho-diamines on phthalaldehydic acid, 969.
- Bistrzycki, A., and F. Ulfers, diacetylorthodiamines, 1115.
- Blackman, F. F. See Ruhemann.
- Bladin, J. A., ditriazole derivatives, 271.
- oxidation of phenylmethyltriazole-carboxylic acid, 1165.
- Blaese, O. v. See Beilstein.
- Blake, J., physiological action and optical properties of inorganic substances, 813.
- physiological action of thallium salts, 1452.
- Blake, R. F. See Letts.
- Blake, W. P., minerals from Arizona, thenardite, mirabilite, glauberite, halite, and bournonite, 572.
- Blanc. See Le Blanc.
- Blanchard, R., colouring matter from *Diaptomus*, analogous to carotene, 640.
- Blasberg, O. See Vortmann.
- Blasi. See De Blasi.
- Bleibtreu, L., nitrogenous constituents of dog's urine, 279.
- Bleibtreu, L. See also Pflüger.
- Blochmann, G. F. R., electromotive forces of cells containing mixed salt solutions, 202.
- Blochmann, R., the concentration of reagents, 412.
- Blomstrand, C. W., cerium and yttrium phosphates in South Norway, 111.
- iodic acid: double salts of iodic acid with other acids, 107.
- monazite from Ural, 571.
- Blount, B., igniting point of sulphur, 849.
- Blum, L., estimation of sulphur in iron, 921.
- volumetric estimation of zinc, 1191.
- Blunt, T. P., assay of emetine in ipecacuanha wine, 310, 548.
- Blyth, A. W., nutritive value of wheat meal, 396.
- Boam, F. W., estimation of arsenic, 1026.
- Bock, J., transformation of cane sugar into dextrose, 21.
- Bockairy, estimation of cotton seed oil in lard, 307.
- Boessneck, P., valuation of wine lees, 303.
- Böttinger, C., benzoyltannin, 163.
- dipyrrogallopropionic acid, 982.
- gallic acid, tannin, and oak-tannin, 1275.
- oxidation of gallic acid, tannin, and oak-tannin, 1130.
- reaction of tannin, 896.
- Boguski, J. J., variations in the electrical resistance of nitrogen peroxide with rise of temperature, 203.
- Bohr, C., compounds of hæmoglobin and oxygen, 1450.
- Boisbaudran, L. de, history of the rare earths, 565.
- new fluorescences, 435.
- Bokorny, T., living vegetable protoplasm, 283.
- Bokorny, T. See also Loew.
- Bondzynski, S., and H. Rufi, analysis of butter, 838.
- Bordt, F. See Bamberger.
- Bormann, K., Götz's method of estimating phosphorus in iron, 416.
- Bornemann, E., paratoluidine oxalate, 137.
- Bornträger, A., polariscopic estimation of sugar in sweet wines, 426.
- Bornträger, H., impurities in commercial alcohol, 669.
- simple and rapid preparation of pure gases, 849.
- Borsbach, E., action of quinoline on copper sulphate, 796.
- double salts of quinoline and metallic quinolides, 643.
- Borsbach, E. See also Vortmann.
- Bourcart, R., titration of alcohol with chromic acid, 1030.
- Bourgeois, L., crystallised basic copper nitrate identical with gerhardtite, 714.
- Boutroux, L., hydroxygluconic acid, 1399.
- Boye, H. See Lellmann.
- Boyer, E., estimation of ash in sugars, 1472.
- estimation of nitric acid, 1025.
- Boymond, trichloracetic acid as a reagent for albumin, 312.
- precipitation of albuminoids from urine, 273.
- Brackett, R. N. See Branner.
- Braikoff, N. P. See Paal.
- Brand, A., metallurgical products from the Mechnich lead works, 338.
- use of double pyrophosphates in the electrolytic estimation and separation of metals, 294.
- Brande, F. See Hilger.
- Brander, K. A., thermoelectric currents between amalgamated zinc and zinc sulphate, 98.

- Brandl, J., and L. Pfeiffer, melanin, 805.
- Branner, J. C., and R. N. Brackett, peridotite from Arkansas, 345.
- Bréal, E., cultivation of Leguminosæ, 660.
- fixation of nitrogen by Leguminosæ, 79.
- Bredig, G., kinetic nature of osmotic pressure, 105.
- Bredt, J., acetyllevulinic acid, 863.
- Breyer, T., estimation of raffinose in raw sugar, 301.
- Brociner, A. L., reactions of the alkaloids, 310.
- Brodsky, H. See Bischoff.
- Brodsky, S. See Bischler.
- Brögger, W. C., minerals of the syenite-pegmatite veins of the South Norwegian augite and nepheline-syenites, 1077.
- Brögger, W. C., and H. Bäckström, dahllite, 714.
- Brown, A. Crum, new synthesis of bibasic acids, 583.
- Brown, A. Crum, and J. Walker, electrolysis of potassium ethyl malonate and potassium ethyl succinate, 583.
- Brown, H. C. See Fittig.
- Brown, H. T., and G. H. Morris, germination of some of the Gramineæ, *TRANS.*, 458.
- identity of cerebrose and galactose, *TRANS.*, 57.
- Browning, P. E. See Gooch.
- Brückner, C., condensation of dichloroether with cresols, 1140.
- Brückner, C. See also Conrad, Hecht.
- Brügelmann, G., characteristics of the alkaline earths and of zinc oxide, 850.
- dimorphism of barium oxide: a new catalytic phenomenon, 850.
- Brühl, J. W., concentration of the sun's rays for chemical reactions, 1033.
- crystallisation at a low temperature, 1043.
- Brünning, G. v., methylhydrazine, 23.
- Bruère. See Casthéla.
- Brugnatelli, E., detection of mercury in organic liquids, 926.
- Bruhns, G., adenine and hypoxanthine, 534.
- Bruhns, W., synthesis of quartz, corundum, &c., 112.
- Bruhns, W., and K. Busz, phosphosiderite, 1073.
- Brunn, O., hydrogen arsenide and antimonide, 209.
- Brunner, H., reaction of sodium nitroprusside with alkaline and alkaline earthy hydroxides, 198.
- synthesis of double sulphides of the alkali metals and the heavy metals, 215.
- Brunton, T. L., and A. Macfadyen, ferment action of bacteria, 916.
- Brush, G. J., and E. S. Dana, mineral locality at Branchville, 1072.
- Bruylants, G., analysis of peptones, 1351.
- Buchan, A., Ruffe's method of estimating ammonia, 1024.
- Bucher, E., oxidation of paratolyl benzyl ketone, 260.
- paramethylbenzile and benzile-paracarboxylic acid, 168.
- Buchka, K., and C. Sprague, action of phenylhydrazine on ethyl thiaceacetate, 796.
- ethyl thiaceacetate, 28.
- Buchner, E., acetylenedicarboxylates and phenylhydrazine, 156.
- action of methyl diazoacetate on the ethereal salts of unsaturated acids, 736.
- Buchner, E., and H. Witter, symmetrical trimethylenetricarboxylic acid, 1397.
- Buchner, O. See Hilger.
- Buddeberg, M., replacement of the methylene hydrogen atoms in deoxybenzoin and benzyl cyanide: synthesis of substituted quinoline, 1142.
- Buddéus, W., action of benzoic chloride on sodium cyanamide in the presence of ether, 1253.
- Budishteano. See Edeleano.
- Bücking, H., glaserite, blodite, kainite, and boracite from Douglasshall, 18.
- Büsgen, M., function of tannin in plants, 819.
- Büttner, M. See Lellmann.
- Buitichichin and Zelinsky, symmetrical diethylsuccinic and methyl-ethylsuccinic acids, 740.
- Bunge, G., respiration of entozoa worms, 274.
- Bunge, N., electrolysis of fatty acids, 1236.
- Burchard, O., ethylenephénylhydrazine, 250.
- Burgdorf, C. See Bamberger.
- Burgemeister, A., apparatus for preparing gases, 556.
- Burghardt, C. A., soda or potash and carbon in analysis, 1027.
- Burstert, H. See Claus.
- Burton, W. M., estimation of petroleum in turpentine, 669.



- Burton, W. M., estimation of sulphur in organic compounds, 289.  
 Burton, W. M., and L. D. Vorce, atomic weight of magnesium, 850.  
 Burton, W. M. See also Remsen.  
 Busch, A., and W. Koenigs, substitution products of lepidine, 1434.  
 Busch, M. See Paal.  
 Busz, K., atesite from Schneeberg, in Saxony, 18.  
 Busz, K. See also Bruhns.  
 Butter, F., hydroxy- $\alpha$ -stilbazole and its derivatives, 1438.

## C.

- Camerer, W., quantitative estimation of uric acid in human urine, 1345.  
 Cameron, C. A., and J. Macallan, selenic acid, 688.  
 Campbell, C. See Zincke.  
 Campbell, J. M. See Henderson.  
 Camps, R. See Baumann.  
 Canby, R. C., estimation of arsenic, 923.  
 Cannone, G. See Ogliastro.  
 Cantzler, A. See Gattermann.  
 Canzoneri, F. See Arata.  
 Carhart, H. S., standard Clark cell, 202.  
 Carles, P., is potassium ferrocyanide poisonous?, 281.  
 Carnegie, D., potassium plumbate: crystalline hydrated thallic oxide, 109.  
 Carnelley, T., and W. Frew, relative antiseptic powers of isomeric organic compounds, *TRANS.*, 636.  
 Carnot, A., mineral waters of Cransac (Aveyron), 1385.  
 Carrara, G., formation of acid chlorides by the action of sulphonic monochloride, 1288.  
 — sulphonic derivatives of paraprolymetachlorotoluene, 779.  
 Carrick, J. T., a product of the condensation of ethyl cyanacetate and benzaldehyde, 1270.  
 Casthélaz and Bruère, preparation of iodoform, 577.  
 Causse, H., dicalcium phosphate, 1056.  
 Cazeneuve, P., acetyl and ethyl derivatives of camphonitrophenol, 63.  
 — amethylcamphophenolsulphone, 1153.  
 — camphonitrophenol benzoate and phthalate, 64.  
 — camphonitrophenol phosphate, 63.  
 — new bases derived from camphor: camphamines, 516.  
 Cazeneuve, P., oxidising and decolorising properties of charcoal, 690.  
 — phenolsulphonic acids from camphor, 791.  
 — researches on the constitution of  $\beta$ -nitrocamphor and of  $\alpha$ -chloronitrocamphor, 515.  
 Cazeneuve, P., and L. Ducher, raisin wines and their richness in nitrogen, 1031.  
 Cederström, A., pseudobrookite from Havredal, Norway, 219.  
 Chabot, P., rotatory power of camphor when dissolved in various oils, 1427.  
 Chabrié, C., preparation of carbon fluorides, 558, 1053.  
 — selenium and oxygen derivatives in the benzene series, 34.  
 — vapour densities of selenium chlorides, 558.  
 Chabrié, C., and L. Lapique, physiological action of selenious acid, 542.  
 Chalmas. See Munier-Chalmas.  
 Chappelle, estimation of total phosphorus in urine, 825.  
 Charlton, T., blowpipe test for mercury, 1343.  
 Charpy, G., determination of the vapour pressure of solutions, 1364.  
 Charpy, G. See also Gautier.  
 Chaston, A. E. See Dunstan.  
 Chatard, T. M., estimation of water and carbonic acid in salts, 417.  
 — urao (native soda), 340.  
 Chatelier. See Le Chatelier.  
 Chatin, A., chemistry of the truffe, 659, 821.  
 Chesneau, G., distribution of hydrogen sulphide between the metals, 1367.  
 Chevreul, M. E., obituary notice of, *TRANS.*, 445.  
 Chittenden, R. H. See Kühne.  
 Choay. See Béhal.  
 Chodat, R., and P. Chuit, investigation on *Lactarius piperatus*, 80.  
 Choupotsky, A., and N. Mariutza, action of chlorine on tetramethylene, 727.  
 Christomanos, A. C., new apparatus for determining melting points, 933.  
 Chroustchhoff, K. v., anorthite and enstatite, 19.  
 — artificial magnesia-mica, 343.  
 Chuit, P. See Chodat.  
 Ciamician, G., conversion of pyrrolidine into tetramethylenediamine, 1242.  
 — derivatives of diallyl, 351.  
 Ciamician, G., and F. Anderlini, tetrabromides of diallyl, 20.

- Ciamician, G., and P. Silber, apiole, 35.  
 ——— constitution of apiole and its derivatives, 1294.  
 ——— derivatives of dichloromaleimide, 24.  
 ——— eugenol, 966.  
 ——— safrole, 965.
- Ciamician, G., and C. U. Zanetti, action of hydroxylamine on pyrrolines, 264, 1155.  
 ——— phenylsuccinazone, 1120.
- Ciamician, G., and C. Zatti, eulyte, 872.
- Claasen, E., cephalanthin, 171.  
 ——— estimation of codeine and morphine, 1198.
- Claisen, L., conversion of ethyl acetone-oxalate into symmetrical hydroxytoluic acid, 364.  
 ——— introduction of acid radicles into ketone molecules, 26.  
 ——— preparation of cinnamic acid and its homologues, 891.
- Claisen, L., and L. Meyerowitz, ketoaldehydes, 357.
- Clarke, F. W., new occurrence of gyrolite, 343.  
 ——— theory of the mica group, 460.
- Clarke, F. W., and G. P. Merrill, nephrite and jadeite, 716.
- Clarke, F. W., and E. A. Schneider, constitution of talc, 948.
- Clarke, H. W. See Hazen.
- Clarkson, P. S. See Macfarlane.
- Classen, A., atomic weight of bismuth, 706.
- Claus, A., alkyl aromatic ketones and their oxidation, 769, 979.  
 ——— bases derived from the halogen alkyl salts of papaverine, 271.  
 ——— bromoquinolinesulphonic acids, 265.  
 ——— constitution of naphthalene, 1424.  
 ——— dichloro- $\alpha$ -naphthaquinone dichloride, 786.  
 ——— the constitution of benzene, 1283.
- Claus, A., and H. Burstert, chlorine substitution products of metaxylene, 1105.
- Claus, A., and C. Geisler, dibromoquinoline, 172.
- Claus, A., and H. Howitz, the halogen alkoxides of ortho-hydroxyquinoline and parahydroxyquinoline, 1323.
- Claus, A., and G. Pollitz, 2'-bromoquinoline, 521.
- Claus, A., and M. Posselt, 1:4-hydroxyquinolinesulphonic acid, 522.  
 ——— 3-hydroxyquinolinesulphonic acid, 523.
- Claus, A., and G. Runschke, the orientation of 4:6-dichlorometaxylene, and on some derivatives thereof 1246.
- Claus, A., and W. Ruppel, di- $\beta$ -naphthylketone oxide, 510.
- Claus, A., and W. Schmeisser, sulphonic acids of 4-bromoquinoline, 266.
- Claus, A., and G. N. Vis, 1:2-dibromoquinoline and derivatives of 2-bromoquinoline and 4-bromoquinoline, 173.
- Claus, A., and A. Welter, bromoderivatives of quinoline, 173, 1320.
- Claus, A., and O. Welzel, normal propylbenzenesulphonic acid, 503.
- Claus, A., and O. Würtz, sulphonic acids of 4-bromoquinoline, 267.
- Claus, A., and G. Zuschlag, 3:1-bromoquinolinesulphonic acid and 4:3-nitrobromoquinoline, 267.
- Clausius, A., 2:2'-dihydroxynaphthalene, 627.
- Cleaves, J. F., and J. C. Platts, analysis of water from the Roundwood Colliery, 222.
- Cleve, P. T., 1:1-chloronaphthalenesulphonic acid, 635.  
 ——— derivatives of 1:3-dichloronaphthalene, 626.  
 ——— 1:4-nitronaphthalenesulphonic acid, 634.
- Cloez, C., hydroxytetracetic acid, 739.
- Cloez, C. See also Grimaux.
- Clowes, F., deposits of barium sulphate from mine water, 853.
- Coda, D., estimation of zinc in its ores, 1191.
- Cohen, E., garnet from the South African diamond fields, 1076.
- Cohen, J. B., Wiborgh's method for the estimation of sulphur in iron and steel, 1463.
- Cohen, J. B. See also Grant, Oddy, Ormandy.
- Cohen, R., experimental determination of the ratio of the specific heats in superheated steam, 205.
- Cohn, E., specific inductive capacity of water, 203.
- Cohn, R., behaviour of tyrosine ethyl ether in animal metabolism, 187.  
 ——— benzamide in urine after administration of benzaldehyde, 188.
- Cohn, R. See also Jaffe.
- Colasanti, G., new reaction of thiocyanic acid, 424.
- Coldridge, W., electrical and chemical properties of stannic chloride, 1065.
- Colley, R., Berthelot's law of maximum work and spontaneous endothermic reactions, 681.

Collie, N., and S. B. Schryver, action of heat on the chlorides and hydroxides of mixed quaternary compounds, *TRANS.*, 767.  
 Colson, A., Berthelot's laws, 1367.  
 — reactions of organic bases, 1368.  
 — thermochemistry of nicotine, 101.  
 Combes, A., derivatives of acetyl-acetone, 1394.  
 Combes, C., matezite and matezodambose, 471.  
 Comey, A. M., ethanediquinolyline, 1007.  
 Commelin. See Bailhache.  
 Comstock, W. J., alkylation of form-anilide, 1258.  
 Comstock, W. J., and F. Kleeburg, silver formanilide, 1414.  
 Coninck, O. de, ptomaines, 1170.  
 Conrad, M., and C. Brückner, determination of affinity coefficients, 327.  
 Conrad, M. See also Hecht.  
 Cooke, J. P., new method of determining gas densities, 321.  
 Cooksey, T. See Zincke.  
 Copeman, S. M., and C. S. Sherrington, the proportion of blood to body weight, 1615.  
 Coppola, F., origin of urea in the animal economy, 184.  
 Cossa, A., platosemiamine chloride, an isomeride of Magnus' salt, 1218.  
 Costa, T., relation between the molecular refractive energy and the dispersive power of aromatic derivatives with saturated lateral chains, 1201.  
 Coullon, M. See Godeffroy.  
 Cownley, A. J. See Paul.  
 Craig, G., estimation of silica and analysis of siliceous materials, 194.  
 Crawley, J. T., simplified fat extraction apparatus, 304.  
 Cripps, R. A., diastatic power of extract of malt, 432.  
 — reactions of essential oils, 200.  
 Crismer, L., compounds of hydroxylamine with metallic chlorides, 558.  
 — test for aldehyde, 1197.  
 Cristaldi. See Grassi-Cristaldi.  
 Cross, C. F., and E. J. Bevan, contributions to cellulose chemistry, acetylation of cellulose, *TRANS.*, 1.  
 — interaction of hypochlorites and ammonium salts. Ammonium hypochlorite, *Proc.*, 1890, 22.  
 — the constituents of flax, *TRANS.*, 196.  
 Cross, W., phonolites from Colorado, 1075.  
 — some secondary minerals of the amphibole and pyroxene groups, 1081.

Crum Brown, A. See Brown, A. Crum.  
 Cuénot, L., blood of the *Aplysia*, 810.  
 Culman, J., tetraphenyltetracarbazone, 1268.  
 Cundall, J. T., production of ozone by flames, *Proc.*, 1890, 26.  
 Curchod, A. See Levy.  
 Curtius, T., and R. Jay, preparation of hydrazine from aldehyde-ammonia, 734.  
 Cusson. See Roos.

# D.

Dahl, F. See v. Pechmann.  
 Dale, J., obituary notice of, *TRANS.*, 446.  
 Dale, T. P., refractive indices of gases, 201.  
 Dana, E. S., barium sulphate from Perkins' Mill, Quebec, 572.  
 Dana, E. S. See also Brush, Hillebrand.  
 Daniel, L., inulin in the capitula of composites, 191.  
 Darapsky, L., atacamite in Chili, 111.  
 — minerals from Atacama, 455.  
 Dastre, A., physiological rôle of lactose, 186.  
 Davenport, B. F., milk analysis, 670.  
 Davies, R. H., iodine absorption of essential oils, 199.  
 Day, A. W., and S. Gabriel, orthocyanobenzyl chloride, 1249.  
 De Blasi, L., Brieger's typhotoxine, 391.  
 De Blasi, L., and G. R. Travali, reducing power of micro-organisms, 1453.  
 De Boisbaudran. See Boisbaudran.  
 Debout, C. See Favorsky.  
 De Coninck. See Coninck.  
 De Forcrand, action of erythrol on alkali alkyl oxides, 935, 950.  
 — preparation and heat of formation of sodium erythoxide, 935, 950.  
 De Gramont, A., artificial production of boracite in the wet way, 1384.  
 Dehérain, P. P., causes of the exhaustion of arable soil by cropping without manures, 406.  
 — exhaustion of cultivated but unmanured soils: drainage waters, 1459.

- Dehéraïn, P. P., experimental plots at Grignon in 1889, 820.
- Dehoff, H., nitro- and chloro-derivatives of  $\beta$ -methyl- $\delta$ -hydroxyquinazoline, 802.
- De Koninck, L. L., reduction of ferric bromide by boiling, 111.
- De Koningh, L., chromium and barium in foods, 195.
- De Koningh, L. See also Muter.
- Delachanal. See Vincent.
- Delacharlouney, P. M., normal aluminium sulphate, 1384.
- De La Harpe, C. See Reverdin.
- De La Rue, Warren, obituary notice of, *TRANS.*, 441.
- Delépine, S., cystin in the urine, 1018.
- normal storage of iron in the liver, 1177.
- Delisle, A. See Fittig.
- Demuth, R., and V. Meyer, action of oxygen on zinc ethyl, 481.
- determination of vapour-densities of substances below their boiling points, 440.
- Guinochet's isomeric tricarballic acid, 595.
- nitrethyl alcohol, 857.
- Denaro. See Leone.
- Denayer, A., analysis of peptones, 1351.
- Denigès, G., characteristic reaction of hydrogen peroxide, 1185.
- phosphorus trichloride and oxygen-chloride, 664.
- Deninger, A., action of nascent nitrous acid on various amines and phenols, 38.
- Dennstedt, M., action of acetone on pyrroline, 999.
- conversion of pyrroline into its homologues, 1428.
- De Rey-Pailhade, J., alcoholic extract of yeast, 905.
- De Roode, R., combustion with lead chromate, 926.
- De Schulten, A., artificial formation of malachite, 454.
- cadmium phosphates and arsenates, 11.
- crystalline anhydrous zinc phosphate and zinc arsenate, 214.
- preparation of crystalline normal lithium phosphate and arsenate, 10.
- Devarda, A., Jodlbauer's modification of Kjeldahl's method for the estimation of nitrogen in nitrates, 292.
- De Varda, G., tertiary pyrrolines, 389.
- Deventer. See Van Deventer.
- Dewar, J. See Liveing.
- Dickinson, W. L. See Langley, Lea.
- Dieffenbach, O., heat of combustion and constitution of organic compounds, 1206.
- Dieterici, C., specific volume of aqueous vapour, 207.
- Dietze, A. See Nietzki.
- Diller, J. S., native gold in calcite, 569.
- Ditte, A., action of nitric acid on aluminium, 702.
- action of sulphuric acid on aluminium, 701.
- action of the haloid compounds of the alkalis on those of mercury, 1059.
- Dittrich, E., action of picric chloride on ethyl sodacetoacetate, 1418.
- Dixon, A. E., phenyl salt of phenylthiocarbamic acid, *TRANS.*, 268.
- semithiocarbazides, *TRANS.*, 257.
- Dobbin, L., detection and estimation of alkaline hydroxides in presence of alkaline carbonates, 293.
- tertiary butyl mercaptan, *TRANS.*, 639.
- Dodge, F. D., the Indian grass oils, 231.
- Doebner, O., compounds of benzotrichloride with naphthols, 901.
- formation of racemic acid by the oxidation of unsaturated acids, 1274.
- symmetrical alkylisophthalic acids, 1283.
- Doebner, O., and A. Foerster, pyrogallolbenzeïn, 899.
- Doebner, O., and J. Peters,  $\alpha$ -cinnamenylcinchoninic acid and  $\alpha\gamma$ -quinoline-dicarboxylic acid, 176.
- formation of  $\alpha$ - and  $\beta$ -phenylene-pyridineketonecarboxylic acids, 1007.
- Dölter, C., constitution of certain zeolites, 717.
- solubility of minerals, 1070.
- Donath, E., detection of nitrogen in organic compounds, 663.
- Donner, A. See Lellmann.
- Dott, D. B., estimation of urea, 931.
- Dott, D. B. See also Stockmann.
- Doubevitch, W., pentatomic alcohol and unsaturated glycerol from diallylcarbinol, 729.
- Doumer, E., refractive powers of salts in solution, 1033.
- refractive power of solutions of double salts, 433.
- refractive power of solutions of simple salts, 433.

- Dralle, C. See Schall.  
 Dressel, O. See Guthzeit.  
 Dubois, H. See Fittig.  
 Dubourg, E. See Gayon.  
 Ducher, L. See Cazenave.  
 Düll, G. See Kiliani.  
 Dürkopf, E., belladonnine, 271.  
 Dürkopf, E., and H. Götsch, a new  
 lutidine, 1002.  
 ——— pyridine derivatives from  
 propaldehyde and propaldehyde-am-  
 monia, 794, 1002.  
 Duggan, C. W. See Haycraft.  
 Duisberg, C. See Griess.  
 Dumont. See Schmitz-Dumont.  
 Duncan, C. C., production of pure  
 metallic copper in a crystalline con-  
 dition, *Proc.*, 1890, 95.  
 Dunstan, W. R., double cyanides of  
 zinc and mercury, 855.  
 ——— Mussenda coffee, 285.  
 ——— scatole in the vegetable kingdom,  
 191.  
 Dunstan, W. R., and A. E. Chaston,  
 chemical constituents of *Scopola*  
*carniolica*, 402.  
 Dunstan, W. R., and T. S. Dymond,  
 conditions under which hydrogen  
 peroxide is formed from ether, *TRANS.*,  
 574, 988.  
 ——— estimation of nitrites, 193.  
 Durin, E., rôle of sugar and its de-  
 velopment during the growth of the  
 beetroot, 1020.  
 Du villier, E., action of ethyl iodide  
 on amido-acids, 956.  
 ——— action of triethylamine on ethyl  
 $\alpha$ -bromobutyrate and ethyl  $\alpha$ -bromo-  
 propionate, 234.  
 ——— action of trimethylamine on ethyl  
 bromisovalerate, 956.  
 ——— preparation of betaïnes, 747.  
 Dymond, T. S. See Dunstan.

## E.

- Eakins, L. G., meteoric iron from  
 North Carolina, 1081.  
 ——— new stone meteorite, 574.  
 Easterfield, T. H., trough for Hof-  
 mann's vapour density apparatus,  
 681.  
 Ebel, F., antimonates, 216.  
 Eckenroth, H., and J. Rückel, di-  
 phenyl carbonate, 750.  
 Eckhardt, F. See Lintner.  
 Edeleano, L., and Budishteano,  
 preparation of unsaturated aromatic  
 acids, 891.  
 Edinger, A., pyridines: their relation  
 to quinoline, isoquinoline, and the  
 alkaloids, 794.  
 Edwards, G. S. See Abney.  
 Eggertz, C. G., and L. F. Nilson,  
 moorland and peat soils, 192.  
 Ehrhardt, R. See Gattermann.  
 Ehrlich, E., oxidation of orthocarb-  
 oxcinnamic acid, 54.  
 Eichelbaum, G., action of hydroxyl-  
 amine on orthocyanobenzyl cyanide,  
 146.  
 Eichengrün, A., and A. Einhorn,  
 paramethoxydihydroxydihydroquino-  
 line and a new case of stereochemical  
 isomerism, 1127.  
 Eichkoff, hydroxylamine hydrochlor-  
 ide, 558.  
 Eiloart, A., chlorine compounds of  
 toluene, 899.  
 Einhorn, A., reaction between cocaine  
 and atropine, 1010.  
 ——— synthesis of alcohol-acids of the  
 pyridine series, 520.  
 Einhorn, A., and C. Gehrenbeck,  
 action of orthonitrocinnamaldehyde  
 on malonic acid, 163.  
 ——— derivatives of paranitrocin-  
 namaldehyde, 161.  
 Einhorn, A., and A. Marquardt,  
 dextrococaine, 646, 913.  
 Einhorn, A. See also Eichengrün.  
 Ekbohm, A., action of hydriodic acid  
 on 1:4'-nitronaphthalenesulphon-  
 amide, 994.  
 Ekstrand, A. G., and R. Mauzelius,  
 molecular weights of maltose and of  
 several inulin-like substances, 227.  
 Elbs, K., homologues of anthracene  
 and anthraquinone, 511.  
 Ellenberger and Hofmeister,  
 digestion in the pig, 183.  
 Elliott, W. J. See Ruhemann.  
 Ellis, G. E. R., estimation of copper by  
 titration with potassium cyanide, 547.  
 Elster, J., and H. Geitel, electrical  
 conductivity of air due to the forma-  
 tion of ozone, 676.  
 Emden, R., vapour pressure of aqueous  
 solutions, 323.  
 Emery, W. O., constitution of succinic  
 chloride, 236.  
 ——— tricarballic acid, 133.  
 Emery, W. O. See also Anschütz.  
 Emmerling, A., and G. Loges, com-  
 position and digestibility of the pro-  
 teids of various grasses, 657.  
 Engel. See Berthelot.  
 Engel, R., hydrochlorides of chlorides,  
 106.  
 ——— influence of hydrogen chloride on  
 the solubility of cuprous chloride and  
 of lead chloride, 109.

- Engel, R., oxidation of hypophosphorous acid by spongy palladium, 690.  
 Enke, E., ethereal salts of alkyloxy-quartenylic acids, 865.  
 Enoch, C. See Tafel.  
 Ephraim, J., derivatives of deoxybenzoïn, 1143.  
 Erdmann, H.,  $\beta$ - and  $\delta$ -benzallevulinic acids, 1129.  
 — derivatives of benzallevulinic acid, 375.  
 Erlenmeyer, E., jun., benzallevulinic acid, 495.  
 Ernert, P. See Behrend.  
 Ernst, H. W. See Goldschmidt.  
 Ernst, O. See Nietzki.  
 Errera, G., action of chromyl dichloride on cymene, 1254.  
 — nitrocymenesulphonic acids, 1287.  
 Erwig, E., and W. Koenigs, pentacetylevulose, 732.  
 Eschweiler, W., formaldehyde, 954.  
 Eschweiler, W. See also Kraut.  
 Étard, A., simultaneous solubility of sodium and potassium chlorides, 103.  
 — solubility of saline mixtures, 442.  
 — substitution of salts in mixed solutions, 443.  
 Étard, A., and P. Lebeau, volumetric estimation of copper, 665.  
 Etti, C., tannins, 164, 257.  
 Evans, N. P. See Anschütz.  
 Eyerman, J., calamine and apophyllite from the United States, 113.  
 — mineralogy of the French Creek mines, 113.  
 Eykman, J. F., apparatus for making vapour density determinations under reduced pressure, 101.  
 — constitution of asarone, 244.  
 — conversion of allylbenzene- into propenylbenzene-derivatives, 748.  
 — cryoscopic method of determining molecular weights, 324.  
 — ethereal oil of betel leaves, 135.

## F.

- Faber, H., condensed milk and the estimation of caseïn and lactalbumin, 92.  
 Fahrig, E., phosphorescence produced by the contact of ozone with certain waters, 1202.  
 Farrington, T., mixture of alcohol and water, 856.  
 Fasnacht, A. E., and C. R. Lindsey, decahydrated lead acetate, 862.  
 Favorsky, A., dimethylacetylene and its tetrabromides, 1220.  
 Favorsky, A., and C. Debout, the geometrical isomerism of the bromo-derivatives of pseudobutylene, 1218.  
 Fawcett, T., estimation of cinchona alkaloids, 309.  
 Fehrlin, H. C., isomeric hydrazones of orthonitrophenylglyoxylic acid, 1117.  
 Feist, F. See Fittig.  
 Feit, W., kaliborite, a new boron mineral, 341.  
 Feldmann. See Melikoff, Zelinsky.  
 Ferratini, A. See Zatti.  
 Fert, J. See Pictet.  
 Féry, C. See Baillie.  
 Fessenden, R. A., volumetric analysis of copper, 926.  
 Firbas, R., bases contained in the young shoots of *Solanum tuberosum*, 75.  
 Firket, A., artificial fayalite, 20.  
 Fischer, B., impurities in commercial salicylic acid, 88.  
 Fischer, E., acids of the sugar group, 1398.  
 — optical isomerides of grape sugar, gluconic acid, and saccharic acid, 1389.  
 — reduction of acids of the sugar group, 597.  
 — synthesis of mannose, dextrose, and levulose, 466.  
 — syntheses in the sugar group, 1223.  
 — trinitrohydrazobenzene, 40.  
 Fischer, E., and F. Ach, phenylhydrazone, 40.  
 Fischer, E., and J. Hirschberger, mannose, 224.  
 Fischer, E., and J. Meyer, methylation of the indoles, 1421.  
 Fischer, E., and F. Passmore, formation of phenylhydrazides, 152.  
 — — — sugars richer in carbon from d-mannose, 1230.  
 Fischer, O., and E. Hepp, fluorindine, 1444.  
 — — — induline group, 908.  
 — — — indulines, 764.  
 — — — oxidation of orthophenylenc-diamine, 800.  
 — — — oxidation products of ortho-diamines and orthamidophenols, 1444.  
 — — — paranitrosodiphenylmeta-phenylenediamine, 613.  
 Fittica, F., the second monobromobenzene, 962.  
 Fittig, K., action of ammonia on lactones, 879.  
 — action of sodium and sodium

- ethoxide on ethereal salts of lactic acids and on lactones, 866.
- Fittig, R., lactic acids, lactones, and unsaturated acids, 583.
- Fittig, R., and H. C. Brown, salicylaldehyde and pyrotartaric acid, 777.
- Fittig, R., and A. Delisle, propionaldehyde and succinic acid, 587.
- Fittig, R., and H. Dubois, caprolactone, 868.
- $\gamma$ -hydroxycapronamide, 880.
- Fittig, R., and F. Feist, valeraldehyde and pyrotartaric acid, 591.
- Fittig, R., and I. Fränkel, acetaldehyde and succinic acid, 584.
- Fittig, R., and J. Kraenker, ethyl isobutylparaconate, 874.
- Fittig, R., and H. Leoni, ethyl phenylparaconate, 894.
- Fittig, R., and S. Levy, ethyl terpenylate, 873.
- Fittig, R., and L. Liebmann, benzaldehyde and pyrotartaric acid, 775.
- Fittig, R., and H. E. Miller, chloral and succinic acid, 586.
- Fittig, R., and L. J. Morris, action of halogen acids on phenylbutyrolactone, 891.
- phenyl- $\gamma$ -hydroxybutyramide, 890.
- Fittig, R., and G. Parker, condensation of ketonic acids with dicarboxylic acids, 1102.
- Fittig, R., and J. Politis, anisaldehyde and succinic acid, 770.
- Fittig, R., and H. Rasch,  $\gamma$ -hydroxyvaleramide, 879.
- valerolactone, 867.
- Fittig, R., and R. Riechelmann, cinnamaldehyde and pyrotartaric acid, 593.
- Fittig, R., and P. Röders, phenylitaconic acid, 895.
- phenylparaconic acid, 621.
- Fittig, R., and A. Schmidt, butaldehyde and succinic acid, 588.
- ethyl propylparaconate, 872.
- Fittig, R., and A. Schneegans, valeraldehyde and succinic acid, 590.
- Fittig, R., and A. Zanner, isobutaldehyde and succinic acid, 589.
- Flavitzky, F., dextrorotatory terpene from *Pinus cembra*, 789.
- Flehsig, E. See Weiske.
- Fleischl v. Marxow, E., production of monochromatic light, 549.
- Fleissner, F. See Lippmann.
- Flimm, W., synthesis of indigo from bromacetanilide, 383.
- Flink, G., rhodotilite and heliophyllite, from Sweden, 459.
- Flink, G., and A. Hamberg, crystals of sarkinite, 715.
- Flourens, G., products of the saccharification of amylaceous substances by acids, 1089.
- Flückiger, F. A., estimation of morphine in opium, 94.
- Flug, K., new variety of aluminite, 454.
- Fock, A., and K. Klüss, potassium tetrathionate and pentathionate, 1210.
- thiosulphates, 210, 330, 564, 1057.
- Foerster, A. See Doebner.
- Foerster, O., apparatus for drying fodders containing drying oils, 670.
- Kjeldahl's method for the estimation of nitric and total nitrogen, 1466.
- Fogh, J., action of sodium thiosulphate on silver salts, 694.
- decomposition of lead thiosulphate by heat: lead trithionate, 700.
- lead sodium thiosulphates, 700.
- lead thiosulphate, 700.
- thermochemistry of thiosulphates, 679.
- Fogh. See also Berthelot.
- Forerand. See De Forerand.
- Formánek, J., dithioamide (cyanogen disulphhydrate), 29.
- estimation of inverted sugar, 836.
- uranyl chromate and its double salts, 852.
- Forte, O., naphthylamidoacetic acid, 900.
- Foullon, H. v., minerals from the Tyrol, blodite, brucite, and red manganese ore, 339.
- Foullon, H. v., and V. Goldschmidt, epidote and muscovite, 344.
- Foullon, H. v. See also Schuster.
- Fouquet, action of hydrocyanic acid on calomel, 223.
- Fowler, G. J., and J. Grant, influence of different oxides on the decomposition of potassium chlorate, TRANS., 272.
- Fox, J. J. See Frankland.
- Fränkel, I. See Fittig.
- Fränkel, S. See Kerry.
- Frank, B., the fungus symbiosis of the Leguminosæ, 1020.
- Franke, E., benzenesulphonethioamide and its anhydride, 1289.
- Frankel, L. K. See Smith.
- Frankland, E., chemistry of storage batteries, 842.
- Frankland, P. F., and J. J. Fox, fermentation of mannitol and glycerol, 915.
- Frankland, P. F., and F. J. Hambly,

- composition of the milk of the bottle-nose whale, 812.
- Fraser, T. R., *Strophanthus hispidus*, 262.
- Freda, G., composition of saline sublimates from Vesuvius, 571.
- recent Vesuvian lavas, 573.
- Freer, P. C., action of sodium on acetone, 956.
- French, A., peculiar crystalline alloy of copper, tin, and lead, 335.
- Fresenius, R., separation of barium and strontium, 826, 924.
- Fresenius, R., and E. Hintz, analysis of chrome-iron ore, 828.
- Fresenius, W., examination and valuation of spirituous liquors, 1194.
- Freund, M., hydrastine, 534.
- hydrazines, 148.
- Freund, M., and P. Herrmann, new hexylamine and a new hexyl alcohol, 473.
- Freund, M., and P. Immerwahr, reduction of nitriles, 1407.
- Freund, M., and F. Kuh, constitution of carbizines, 1440.
- Freund, M., and F. Lenze, tertiary butylcarbinol, 1388.
- Freund, M., and P. Remse, reduction of nitriles, 1422.
- Freund, M., and A. Rosenberg, hydrastine, 532.
- Frew, W. See Carnelley.
- Freydl, J., loss of nitrogen in some analyses by Will and Varrentrapp's method, 1194.
- Friedburg, L. H., formation of anthraquinone, 1425.
- preparation of thiophen, 1400.
- Friedburg, L. H., and J. A. Mandel, action of nitrous anhydride on various substances in solution in carbon bisulphide, 1401.
- Friedel, C., and G. Friedel, action of solutions of alkalis, &c., on mica, 1080.
- Friedel. See also Berthelot.
- Friedheim, C., tungstovanadic acids, 1066.
- meteorites of Alfanello and Concepcion, 115.
- separation of vanadic and tungstic acids, 666.
- Friedheim, C., and W. Schmitz-Dumont, arsenovanadic acids, 1380.
- Friedheim, C., and M. Szamatólski, so-called phosphovanadic acid and its salts, 1067.
- Friedreich, A. See Smolka.
- Friedrich, I., lead tetrachloride, 699.
- Fromm, E., disulphones and trisulphones, 55.
- Fromm, E. See also Baumann.
- Fromme, C., maximum polarisation of platinum electrodes in sulphuric acid, 316, 675.
- Fuchs, F., improvement in the method of estimating carbonic anhydride by volume, 194.
- Funaro, A., composition of limestones from the "Montagnola Senese," 712.
- sénégine from *Polygala senega*, 262.

## G.

- Gabriel, S., action of hot water on albuminoids, 535.
- $\gamma$ -amidobutyric acid, 360.
- $\gamma$ -chlorobutyronitrile, 1221.
- intramolecular change of allyl-carbamides into isomeric bases, 127.
- nutritive value of different albuminoids, 394.
- synthesis of homopiperic and piperic acids, 1129.
- Gabriel, S., and P. Heymann, preparation of anhydro-bases from amido-mercaptans of the fatty series, 524.
- Gabriel, S., and T. Heymann, oxazones, 1267.
- Gabriel, S., and R. Jansen, quinazones, 1442.
- Gabriel, S., and W. E. Lauer, derivatives of propylamine, 472.
- Gabriel, S. See also Day.
- Galewsky, P., action of ammonia on di- and tri-halogen substitution products of hydrocarbons, 952.
- Galitzine, B., sphere of action of molecular forces, 105.
- Gaus, R., estimation of potassium hydrogen tartrate and of tartaric and malic acids in wine, 427.
- Gantter, F., estimation of tannin by permanganate, 430.
- Gardner, J. A., compounds of tertiary amines with acetic acid, 1156.
- Garzino, L., chlorodibromo- and bromodichloro-phenol and their conversion into quinones, 1108.
- metadichlorophenol and metadibromophenol, 1107.
- Gasch, estimation of ferrocyanides in the bye-products of gas works, 834.
- Gattermann, L., isomerism of organic substances containing nitrogen, 1112.
- Gattermann, L., R. Ehrhardt, and H. Maisch, synthesis of ketones from phenol ethers by Friedel and Crafts's method, 962.



- Gattermann, L., and W. Haussknecht, formation of thiocyanates from amido-compounds, 749.
- spontaneously inflammable hydrogen phosphide, 942.
- Gattermann, L., W. Haussknecht, A. Cantzler, and R. Ehrhardt, diazo-compounds, 970.
- Gattermann, L., and A. Ritschke, azoxyphenol ethers, 1119.
- Gattermann, E., and A. Rossolymo, modification of the chloroformamide synthesis, 974.
- Gaube, reducing substance in urine, 188.
- Gautier, H., apparatus for distillation under reduced pressure, 329.
- Gautier, H., and G. Charpy, iodine in solution, 446.
- Gawalowski, A., volumetric estimation of sulphuric acid, 825.
- Gayon, U., and E. Dubourg, alcoholic fermentation of invert sugar, 950.
- Gaze, R., berberine and hydroberberine, 1011.
- Gehrenbeck, C. See Einhorn.
- Geisenheimer, G., combination of iridium phosphochlorides with arsenic chloride, 1069.
- iridium dioxide, 948.
- iridium phosphorus bromides, 1383.
- iridium phosphorus chlorides, 1068.
- Geisenheimer, G., and F. Leteur, new form of ammonium chloride, 694.
- Geisler, C. See Claus.
- Geitel, H. See Elster.
- Gendron, galvanic dichromate cell, 1354.
- Genth, F. A., an undescribed meteoric iron from East Tennessee, 115.
- corundum from Patrick Co., Virginia, 570.
- gadolinite, cacoclasite, and monazite, 457.
- jarosite from Utah, 573.
- Genth, F. A., and S. L. Penfield, landsfordite and nesquehonite, 571.
- Georgesco, action of sulphuric acid on tribromophenol, 883.
- Gérard, E., new acid of the acetic series, 1395.
- Gernez, D., combination of malic acid with normal potassium and sodium tungstates, 1102.
- rotatory power of compounds of malic acid with normal lithium and magnesium molybdates, 744.
- Gerrard, A. W., percentage glucosometer, 300.
- Gerrard, A. W., and W. H. Symons, ulexine, 180.
- Gessard, C., chromogenic function of *Bacillus pyocyaneus*, 655.
- Geuther, A., obituary notice of, TRANS., 448.
- Giacosa, P., and M. Soave, bark of *Xanthoxylon senegalense*, 918.
- Gibbs, W., and H. A. Hare, action of related compounds on animals, 280, 813, 1018.
- Gibson, H. B., and C. F. Kahnweiler, derivatives of furfuracrylic acid, 959.
- Gibson, J., action of sodium carbonate and bromine on solutions of nickel and cobalt salts, 568.
- Giesel, F., cinnamylcocaine occurring in coca leaves, 390.
- methylcocaine, 1011.
- Giesel, F. See also Liebermann.
- Gilbert, H., examination of castor oil, 429.
- examination of oil of cassia, 423.
- Gilbert, J. H., experiments at Rothamsted on the growth of potatoes, 409.
- Gilbert, J. H. See also Lawes.
- Gilbert, J. P., estimation of silica in silicates by fusion with alkaline carbonates, 1026.
- Ginsberg, J., apiole, 518.
- Ginsberg, S., absorption of sugar from the small intestine, 276.
- Girard, A., rotatory power of matezite and matezo-dambose, 471.
- Giraud, H., action of aluminium chloride on dimethylaniline, 137.
- analysis of methylanilines, 309.
- Giraud, See Roos.
- Giunti, M., action of light on the acetic fermentation, 1181.
- Gladding, T. S., examination of lard for adulteration, 93.
- Gläser, M., and T. Morawski, action of lead peroxide on organic substances in alkaline solution, 20.
- Glaser, E., estimation of ferric oxide and alumina in phosphatic manures, 420.
- Glatzel, E., preparation of crystallised iron bisulphide (iron pyrites), 338.
- preparation of manganese from manganese chloride and magnesium, 110.
- Glücksmann, G., oxidation of ketones with potassium permanganate in alkaline solution, 237, 1416.
- Gnezd, J., a cyanogen reaction of proteids, 1032.
- Gockel, A., seat of the variation of

- electromotive force with temperature, 1035.
- Godchaux, E. See Michaelis.
- Godeffroy, R., and M. Coulon, estimation of wood fibre in paper, 670.
- Goebel, H., volumetric estimation of sodium carbonate and hydroxide in commercial caustic soda, 293.
- Goeldner, M., detection of cocaine hydrochloride, 96.
- Goessmann, C. A., analysis of white Soja beans, 192.
- Göttig, C., compound of calcium chloride with normal propyl alcohol, 465.
- crystallisation of sodium hydroxide from isobutyl alcohol, 1222.
- Göttsch, H. See Dürkopf.
- Goldberg, G., isophthalenediamid-oxime, 147.
- Goldenring, A., derivatives of trimethylenediamine, 976.
- Goldmann, F., mesoanthramine, 1426.
- Goldschmidt, H., isomeric oximes, 1261.
- oximes, 251, 1412.
- Goldschmidt, H., and H. W. Ernst, orthanisamine and salicylamine, 1411.
- Goldschmidt, H., and A. Meissler, experiments to determine the constitution of tautomeric compounds, 499.
- Goldschmidt, H., and Y. Rosell, hydroxyazo- and amidoazo-compounds, 614.
- Goldschmidt, V., chemical mineralogical theories, 219.
- Goldschmidt, V. See also Foullon.
- Goldschmidt, G., action of potash on alkyl derivatives of papaverine, 179.
- Goldschmidt, G., and H. Strache, papaverinic acid and pyropapaverinic acid, 180.
- Goldstein, M., rise of solutions in capillary tubes and the general law of this phenomenon, 684.
- Gooch, F. A., and P. E. Browning, estimation of iodine in haloid salts, 1186.
- Gooch, F. A., and F. W. Mar, direct estimation of chlorine in mixtures of alkaline chlorides and iodides, 920.
- Gordon, J., physiological action of sulphonal, 542.
- Gore, G., molecular constitution of isomeric solutions, 207.
- new method and department of chemical research, 1035.
- rate of chemical change, 327.
- rate of decomposition of chlorine-water by light, 849.
- sensitive test for impurities in mercury, 827.
- solution compounds, 941.
- Gore, G., voltaic energy of dissolved chemical compounds, 317.
- Gorgeu, A., action of hydrogen peroxide on oxygen compounds of manganese, 946.
- action of hydrogen peroxide on permanganic acid and permanganates, 1062.
- alkali aluminium silicates, 13.
- artificial preparation of wollastonite, 18.
- manganous acid, 1060.
- psilomelanes and wads, 570.
- Graebe, C., benzilorthocarboxylic acid, 989.
- the euxanthone group, 504.
- Graetz, L., electrical conductivity of fused and solid salts, 1037.
- Grande, E., phenetolphthaloylic acid, 1128.
- Grandis, V., influence of muscular work, hunger, and temperature on the exhalation of carbonic anhydride, 1334.
- Grant, J., and J. B. Cohen, estimation of alkalis in presence of sulphites, 1468.
- Grant, J. See Fowler.
- Grassi-Cristaldi, G., santonin-phenylhydrazone, 904.
- Green, J. R., germination of the Jerusalem artichoke, 656.
- Greene, W. H., acetometanitrobenzoic anhydride, 53.
- Gressly, O., and M. Nencki, constitution of carbonylorthamidophenol, 1413.
- Griess, P., and C. Duisberg, benzidine and benzidinesulphonic acids, 57.
- Grimaldi, S., methylonylphenylhydrazone, 1394.
- Grimaux, E., homofluoresceïn, 1111.
- Grimaux, E., and C. Cloez, derivatives of erythrol, 730.
- Grimbert and Barré, copper precipitate formed in ordinary water, 851.
- Grimbert, L. See Jungfleisch.
- Grobert, J. v., estimation of the mineral matter in sugar, 670.
- Groddeck, A. v., tourmaline-bearing copper ores from Chili, 114.
- Gröger, M., estimation of neutral fats, 200.
- new gas burners, 106.
- Groenewold, E., aloïn from Barbados, Curaçao, and Natal aloes, 639.
- Groos, A., compounds of pyridine and mercury salts, 643.
- Grosjean, L., *aa*-dithionaphthol, 1306.
- Grosjean, L. See also Jorissen, Krafft.
- Grosset, T. See Beilstein.

- Grossmann, G. See Kraut.  
 Gruenhagen, A., and Krohn, absorption of fat in the intestine, 183.  
 Grünhagen, H., action of methylene chloride on para- and ortho-toluidine, 887.  
 Grünwald, A., spectroscopic evidence of a new element occurring in tellurium and antimony and also in copper, 434.  
 Grünwald, H., estimation of glycerol by oxidation, 198.  
 Grüssner, A. See Benedikt.  
 Grunmach, L., electrical conductivity of solid mercury, 98.  
 Gucci, P., santoninoxime and its derivatives, 902.  
 Guenez, volumetric estimation of tannin, 931.  
 Günther, A., and B. Tollens, fucose, an isomeride of rhamnose, 1393.  
 ——— quantitative estimation of furaldehyde and pentaglucofoses (pentoses), 1352.  
 Günther, H. K., derivatives of paracyanobenzyl chloride, 977.  
 Guignet, C. E., action of cuprammonium sulphate on sorbite, 21.  
 Guinochet, E., dibromotricarballylic acid, 594.  
 ——— isomeride of tricarballylic acid, 238.  
 ——— tricarballylates, 480.  
 Guldberg, C. M., laws of molecular volumes and of boiling points, 1043.  
 Guntz, silver subfluoride, 1055.  
 Guthzeit, M., and O. Dressel, synthesis of dialkyl-substituted glutaric acids and of compounds containing closed carbon chains, 877.  
 Guttman, P., estimation of sugar in urine by fermentation, 836.  
 Guye, P. A., chemical constitution of carbon compounds and the sign and variations of their rotatory power, 722.  
 ——— molecular constitution of compounds at their critical points, 443.

## H.

- Haas, H., separation of titanium from tin, 1029.  
 Haas, H. See also Hilger.  
 Haase, E. See Staedel.  
 Haber, F. See Liebermann.  
 Hafner, A., derivatives of paranitrobenzyl chloride, 486.  
 Hafner, R., action of bromine on paratoluidine in the presence of concentrated sulphuric acid, 137.  
 ——— chlorination and bromination of

- aniline, orthotoluidine and paratoluidine, 37.  
 Hagelberg, L., thiocyno- and selenocyno-derivatives, 949.  
 Hager, H., detection of ceresin, ozocerite and paraffin in beeswax, 421.  
 Haig, A., influence of sodium phosphate on the excretion of uric acid, 397.  
 Haldane, J. S., and M. S. Pembery, estimation of moisture and carbonic anhydride in air, 1188.  
 Haller, A., active and inactive bornylphenylurethanes and isobornylphenylurethanes, 518.  
 ——— alkyl dicyanacetates, 1395.  
 ——— camphorates of the  $\alpha$ -borneols, 790.  
 Haller, A., and Minguin, hydroxycamphocarboxylic acid from camphocarboxylic acid, 638.  
 Halliburton, W. D., pathological effusions, 1173.  
 ——— proteins of liver and kidney cells, 1014.  
 Halphen, G., absorption of bromine by fatty acids, 88.  
 Hamberg, A., native lead from Pajsborg, Sweden, 337.  
 Hamberg, A. See also Flink.  
 Hambly, F. J. See Frankland.  
 Hamburger, H. J., permeability of the red corpuscles in relation to their isotonic coefficients, 809.  
 Hamilton, R., purification of hydrofluoric acid, 687.  
 Hammerlich, H., action of sulphuric acid on iodometaxylene, 1106.  
 Hamonet, J., preparation of alkyl salts of  $\beta$ -ketonic acids, 235.  
 Hand, A., metamerism in derivatives of benzene, 881.  
 Hankó, W., sylvanite and nagyágite from Nagyág, 711.  
 Hanriot, M., and O. Saint-Pierre, oxidation of triphenylmethane, 168.  
 Hansen, A., colouring matter of chlorophyll, 171.  
 Hantzsch, A., breaking the pentamethylene ring, 1091.  
 ——— conversion of pentamethylene-derivatives into benzene-, pyridine-, and thiophen-derivatives, 129.  
 ——— cyanoacetone, 1094, 1095.  
 ——— decomposition products of chloranilic acid, 130.  
 ——— diazothiazoles and their decompositions, 1165.  
 ——— formation of pyrroline derivatives, 1155.  
 ——— haloid derivatives of ethyl acetate, 1238.

- Hantzsch, A., stereochemically isomeric oximes of paratolyl phenyl ketone, 1273.  
 — stereochemically isomeric oximes of phenyl thienyl ketone and phenylglyoxylic acid, 1274.  
 — the stereochemical isomerism of asymmetrical monoximes, 1263.
- Hantzsch, A., and A. Werner, arrangement in space of the atoms in the molecule of carbon compounds containing nitrogen, 348.  
 — — stereochemically isomeric nitrogen compounds, 970.
- Harden, A.,  $\beta$ -nitroso- $\alpha$ -naphthylamine, 630.
- Hare, H. A. See Gibbs.
- Harnack, E., composition of albumin, 392.  
 — preparation and properties of albumin free from ash, 272.
- Harpe. See De La Harpe.
- Harris, E. P., action of chlorocarbonyl-amide on aromatic hydrocarbons in presence of aluminium chloride, 158.  
 — silicon, 108.
- Hartley, W. N., films of vaporised metal, 692.
- Hartmann, A., action of carbonyl chloride on orthodiamines, 975.
- Hartshorn, G. T. See Jackson.
- Haslam, A. R. See Anschütz.
- Hattensaur, G., composition of *Molina cœrulea*, 658.
- Hauff, F.,  $\beta$ -naphthylhydrazine, 61.
- Hausdörfer, A., constitution of diphenylamine- and phenylnaphthylamine-blue, 1308.
- Hausdörfer, A. See also Bischoff.
- Haushofer, K., behaviour of silicates when fused with phosphates, 84.  
 — — microscopical test for tantalum and niobium, 86.
- Hausmann, J., nitrobenzile and its isomeric dioximes, 624.
- Haussknecht, W. See Gattermann.
- Hautefeuille, P., and J. Margottet, simultaneous synthesis of water and hydrogen chloride, 8.
- Hautefeuille, P., and A. Perrey, crystallisation of alumina and other oxides, 1071.  
 — — sodium beryllium silicates, 562.
- Hawkins, J. D., minium from Leadville, 570.  
 — silver silicate, 849.
- Hawkins, J. D., and E. N. Hawkins, platnerite from Idaho, 339.
- Haycraft, J. B., and C. W. Duggan, heat coagulation of certain proteids, 272.
- Haycraft, J. B. and H. Seofield, bile-pigments, 181.
- Hazen, A., estimation of ammonia in sand and sewage, 1024.  
 — estimation of chlorine in water, 86.
- Hazen, A., and H. W. Clark, effect of temperature on the Nessler test, 1024.
- Hazura, K., examination of commercial olefin for linoleic acid, 306.
- Hebenstreit, P., sulphonycyanamides, 501.
- Hebért, A., analysis and composition of straw, 1459.
- Hecht, J. L., dichlorosalicylic acid, 1418.
- Hecht, O., dialkylcyanthiocarbamide, 1103.  
 — propylthiocarbamide and some new thiocarbamides, 476.
- Hecht, W., M. Conrad, and C. Brückner, determination of affinity coefficients, 4, 1046.
- Heckel, E., utilisation and transformations of alkaloids during the germination of seeds, 543.
- Hector, D. S., derivatives of aromatic thiocarbamides, 526.
- Hehner, O., estimation of glycerol in soap lyes and crude glycerol, 425.
- Heiden, E., experiments with farmyard manure, 411.
- Heilmann, E., xylalphthalide and its derivatives, 625.
- Heim, M., hydrastine, a correction, 1333.
- Heinichen, O., dibromosulphanilic acid and its derivatives, 165.
- Hempel, A., alkylorthophenylenediamines and their derivatives, 611.
- Hempel, W., apparatus for evaporating by the aid of heat applied from above, 5.  
 — combustions under a high pressure, 1050.  
 — direct production of crystalline sodium carbonate and chlorine from sodium chloride, 10.  
 — estimation of phosphorus in phosphor-tin, 83.
- Hencke, C., paramidodiphenylamine, 609.
- Henderson, G. G., and J. M. Campbell, the action of chromium oxychloride on nitrobenzene, TRANS., 253.
- Hendrixson, W. S., so-called dihydroxymaleic acid, 958.
- Hendrixson, W. S. See also Hill.
- Henry, L., glycollic nitrile: Direct synthesis of glycollic acid, 739.
- Hentschel, W., apparatus for the estimation of nitrogen in ammonium salts, 1341.  
 — diacetamide, 1239.

- Hepp, E. See Fischer.  
Herb, J. See Baeyer.  
Hergenhahn, E., glycogen in the liver and muscle, 1334.  
Herles, F., formation of raffinose, 226.  
Hermann, B. See Willgerodt.  
Hermann, C. See Paal.  
Hermann, F., configuration of the benzene and hexamethylene molecule, 1105.  
Herrmann, P. See Freund.  
Hertzog, A. C., removal of exhausted solutions from gas apparatus, 557.  
Herz, J., detection of alkanna-red in wine, 311.  
Herz, R., triphenylamine-derivatives, 1409.  
Herzig, J., quercetin-derivatives, 64.  
Herzig, J., and S. Zeisel, desmotropy in phenols, 243, 1404.  
Hesse, O., morphine from *Papaver rhæas*, 646.  
— quinine, cinchonine, and their isomerides, 1166.  
Heumann, K., and H. Rey, dyes of the benzein-group, 157.  
Heusler, nickel ore from Gosenbach, 711.  
Heycock, C. T., and H. F. Neville, molecular weights of metals when in solution, TRANS., 376, 656.  
Heymann, P. See Gabriel.  
Heymann, T. See Gabriel.  
Hidden, W. E., and J. B. Mackintosh, occurrence of polycrase in Carolina, 854.  
— yttria and thoria minerals from Llano Co., Texas, 457.  
Hiepe, C., application of hydrogen peroxide in analysis, 419.  
Hilger, A., and F. Brande, taxine, the alkaloid of the yew tree, 650.  
Hilger, A., and O. Buchner, constituents of Iceland moss, 600.  
Hilger, A., and H. Haas, separation and estimation of tin and titanium, 666.  
Hill, H. B., and W. S. Hendrixson, constitution of methylpyromucic acid, 601.  
Hill, H. B., and L. L. Jackson, chloropyromucic acids, 482, 600.  
Hill, J. R., igniting point of sulphur, 849.  
Hillebrand, W. F., descloizite from new localities, 341.  
— uraninite, 456.  
Hillebrand, W. F., and E. S. Dana, tyrolite from Utah, 853.  
Hillringhaus, A., derivatives of  $\beta$ -naphthylhydrazine, 61.  
Hillyer, H. W., self-regulating gas-generator, 847.  
Hinsberg, O., piazothioles and piaselenoles, 160, 972.  
Hinsberg, O., and L. v. Udránszky, benzoyl derivatives, 370.  
Hinsdale, S. J., colorimetric method for estimating morphine in opium preparations, 1349.  
— colorimetric method for estimating tannin in barks, 1348.  
Hintz, E. See Fresenius.  
Hirsch, P., derivatives of  $\beta$ -bromopropylamine, 859.  
Hirschberger, J. See Fischer.  
Hirschl, J. A., value of the phenylhydrazine test for sugar, 835.  
Hirschsohn, E., detection of ordinary turpentine in Venice turpentine, 307.  
Hirschwald, J., behaviour of silica and its compounds in fused microcosmic salt, 825.  
Hitchcock, R., action of light on silver chloride, 213.  
Hjelt, E., allylethylsuccinic acids, 133.  
— xylene sulphides, 134.  
Hobbs, W. H., allanite and epidote as rock-forming minerals, 460.  
Hochheim, P., amidoximes, 1265.  
Höglund, A. See Pettersson.  
Hölst, G. See Otto.  
Hönig, M., valuation of indigo, 311.  
Hoermann, A. See Paal.  
Hoffmann, C., hydroxamic acids of the fatty series, 127.  
Hoffmann, E., isomeric cuminildioximes, 1143.  
Hoffmann, J., alkyl derivatives of methyluracil, 31.  
Hoffmann, T. See Paal.  
Hoffmeister, W., cellulose and its forms, 581.  
Hofmeister, F., crystallisation of crystalline egg albumin, 182.  
Hofmeister. See Ellenberger.  
Holthof, C., estimation of copper by converting the sulphide into oxide, 665.  
Holverscheit, R., quantitative estimation of vanadium, and the separation of vanadic acid from phosphoric acid, 1343.  
Hooper, D., tannin in India and Ceylon teas, 820.  
Hope, J., estimation of cobalt and nickel, 1470.  
Hopkins, W. B. See Bailey.  
Hoppe-Seyler, F., oxidation in the blood, 651.  
Horbaczewski, J., origin of uric acid in animals, 184.  
Horn, F. M., analysis of boot-blackening, 1478.

Hornberger, R., amount of mineral matter and manurial value of the cupules of the beech from different soils, 287.

Horstmann, A., rôle of solid substances in chemical equilibrium, 1365.

Horwitz, H., analysis of wool oils, 305.

Hotter, E., occurrence of boron in the vegetable kingdom, and its physiological meaning, 1338.

Houllevigne, L., electrolysis of a mixture of two salts in aqueous solution, 678.

Howitz, H. See Claus.

Hubbard, L. L., nosean-bearing ejections from the Laacher See, 220.

Hughes, F. See Meldola.

Hugounenq, L., chloranisoils, 240.

— chlorobenzenes obtained from anisole, 365.

Hullemann, T., ethyl orthoformate, 582.

Hundt, C. See Ladenburg.

Hunter, W., method of raising the specific gravity of the blood, 393.

— pernicious anæmia, 1017.

Hussak, E., artificial preparation of wollastonite, 220.

Hutchinson, A., note on the reduction of aromatic amides, *TRANS.*, 957.

**I.**

Igelström, L. J., anthochroite, a new mineral from Sweden, 114.

— barytic felspar from Sweden, 343.

— native lead in Sweden, 111.

— new Swedish minerals, 1075.

— pleonectite, a new mineral from Sweden, 112.

Ilosvay, L., detection of nitrous acid in saliva, 278.

— formation of ozone and nitrogen oxides during combustion, 447.

— nitrous acid in the atmosphere, 406.

Im mendorf, H., carotene and the green colouring matter of chlorophyll grains, 641.

Immerwahr, P. See Freund.

Ince, W. H., action of amines on diketopentamethylene, 1090.

— phenylated indoles, 57.

Irvine, R., and S. T. Woodhead, secretion of calcium carbonate by animals, 653.

Isbert and Venator, analysis of sodium sulphate, 194.

Istrati, action of fuming nitric acid on hexachlorobenzene, 882.

— action of heat on a mixture of sulphuric acid and sulphonic-derivatives, 51.

— action of sulphuric acid and selenic acid on aromatic compounds, 50.

— composition of Roumanian rock salt, 217.

— conversion of paradichlorobenzene into metadichlorobenzene, 882.

— francein from 1 : 2 : 4-trichlorobenzene, 51.

— franceins, 51.

Itallie. See Van Itallie.

**J.**

Jackson, C. L., compounds prepared from bromonitrobenzenes, 983.

Jackson, C. L., and W. D. Bancroft, tetrabromodinitrobenzene, 982.

Jackson, C. L., and G. T. Hartshorn, so-called anilinetrisulphonic acid, 1287.

Jackson, C. L., and G. D. Moore, action of ethyl sodacetate on tribromodinitrobenzene, 772.

— — action of ethyl sodiomalonate on tribromotrinitrobenzene, 497.

Jackson, C. L., and W. S. Robinson, action of ethyl sodiomalonate on tribromodinitrobenzene, 377.

Jackson, C. L. See also Palmer.

Jackson, L. L. See Auwers, Hill.

Jacobson, P., and V. Schencke, action of carbon bisulphide on certain azo-compounds and hydrazones, 248.

Jacquemin, G., production of ethereal salts by fermentation, 1454.

— the "bouquet" of fermented liquids, 1180.

Jachne, O., ethereal salts of phosphorous acid, 858.

Jaffé, M., and R. Cohn, ethyl carbamate in the alcoholic extract of normal urine, 654.

Jahn, H., electrochemistry and thermochemistry of some organic acids, 99.

Jahoda, R., orthonitrobenzyl sulphide, 487.

— standardisation of permanganate, 196.

Jannasch, P., estimation of sulphur in inorganic sulphides, 1187.

Jannetaz, E., pharmacolite from the Vosges, 342.

Janovsky, J. V., azotoluenes and azoxytoluenes, 140.

Jansen, R. See Gabriel.  
 Japp, F. R., and F. Klingemann,  $\alpha\beta$ -dibenzoylcinnamene and the constitution of Zinin's lepiden and its derivatives, *TRANS.*, 662.  
 ——— reduction of  $\alpha$ -diketones, *PROC.*, 1890, 31.  
 Japp, F. R., and J. Raschen, compound from benzoïn and acetone, *TRANS.*, 783.  
 Japp, F. R., and A. E. Turner, compounds of phenanthraquinone with metallic salts, *TRANS.*, 4.  
 Japp, F. R., and G. H. Wadsworth, paradesylphenol, *TRANS.*, 965.  
 Jaquet, A., hæmoglobin, 273.  
 Jassoy, A., ostruthin, 1154.  
 ——— peucedanin, 1154.  
 Jay, R. See Curtius.  
 Jean, F., new apparatus for the analysis of oils, 671.  
 ——— oil testing, 89.  
 Jean, F. See also Amagat.  
 Jensch, E., estimation of zinc in maniferous flue deposits, 294.  
 Joannis, A., combination of potassium and sodium with ammonia, 209, 560.  
 ——— heat of formation of potassammonium and sodammonium, 319.  
 Jörgensen, S. M., constitution of the cobalt bases, 953.  
 ——— constitution of the cobalt chromium and rhodium bases, 1213.  
 ——— metallic diamine compounds, 953.  
 Johnson, A. E., colorimetric estimation of nitrates in potable waters, 832.  
 Johnson, F., precipitation of copper as thiocyanate, 547.  
 Johnstone, A., detection of metallic silver in the presence of lead, 826.  
 ——— detection of tin in minerals, 830.  
 ——— prolonged action of sea-water on pure magnesium silicate, 451.  
 Johnstone, W., analysis of pepper and the occurrence of piperidine therein, 95.  
 ——— estimation of soluble and insoluble fatty acids in butter, 93.  
 Jolin, S., conditions of absorption of various hæmoglobins, 182.  
 Jolles, A., estimation of tartaric acid in vinegar, 428.  
 Joly, A., chloro-salts and atomic weight of iridium, 1067.  
 Joly, A., and M. Vèzes, ruthenium potassium nitrites, 17.  
 Jones, E. W. T., lactose, 22.  
 Jones, H. C. See Morse.  
 Jorissen and Grosjean, solanidine in potato shoots, 1182.

Joule, J. P., obituary notice of, *TRANS.*, 449.  
 Judd, J. W., evidence afforded by petrographical research of the occurrence of chemical change under great pressure, *TRANS.*, 404.  
 Jumelle, H., relation between the assimilation and transpiration produced by chlorophyll, 190.  
 Jungfleisch, E., camphoric acids, 790.  
 Jungfleisch, E., and L. Grimbert, analysis of sugars, 301.

# K.

Kablukoff, I., electrical conductivity of hydrogen chloride in different solvents, 97.  
 Kahnweiler, C. F. See Gibson.  
 Kaiser, J., diphenyl-derivatives, 897.  
 Kalecsinszky, A., phillipsite from Somoskö, 718.  
 Kalischer, G., electromotive force of selenium, 97.  
 Kassner, G., barium, strontium, and calcium plumbates, 561.  
 ——— lead oxides, 699.  
 ——— new application of potassium ferricyanide, 352.  
 ——— new method of preparing potassium ferricyanide, 352.  
 ——— volumetric estimation of potassium ferricyanide, 834.  
 Kast, H. See Behrend.  
 Kastle, J. H., separation of copper from cadmium, 295.  
 Kaufmann, diastatic ferment of the liver, 185.  
 Kayser, W. See Reissert.  
 Kegel, O. See Zincke.  
 Kehrman, F., action of alkalis and ammonia on halogen-substituted quinones, 136.  
 ——— constitution of eurhodine, induline, and allied dyes, 1265.  
 ——— dependence of substitution phenomena on the atomic or molecular weights of certain atoms or groups, 484.  
 ——— derivatives of symmetrical dinitro-resorcinol, 241.  
 ——— isomerism of halogen thymoquinones, 367.  
 ——— quinonimides and amidoquinones, 756.  
 Kehrman, F., and J. Messinger, action of hydroxylamine on nitroso-phenols, 1403.

- Kehrmann, F., and W. Tiesler, action of hydroxylaminehydrochloride on paradihydroxyquinones, 493.  
 ——— derivatives of metadichloroquinone, 241.  
 Keiser, E. H., atomic weight of palladium, 17.  
 ——— synthesis of fumaric acid, 594.  
 Keller, H. F., kobellite from Colorado, 218.  
 ——— symmetrical tetrabromodiacetyl, 359.  
 Keller, H. F. See also Smith.  
 Kellner, O., digestibility of rice straw, 546.  
 Kellner, O., Y. Mori, and M. Nagaoka, inverting ferment, 281.  
 Kellner, O., and J. Sowano, preparation of silage, 546.  
 Kemp, J. F., porphyrite bosses in New Jersey, 345.  
 Kempff, K., action of benzylamine on methylene chloride, 887.  
 Kernbaum, A. See Walden.  
 Kerry, R., decomposition of albumin by the bacillus of malignant œdema, 542.  
 Kerry, R., and S. Frankel, action of the bacillus of malignant œdema on carbohydrates, 1454.  
 Kerstein, W., hydrastine, 74.  
 Kerstein, W. See also Schmidt.  
 Keutgen, C. H., action of sulphur on glycerol, 577.  
 Kikuchi, Y., anorthite from Miyakejima, Japan, 718.  
 Kiliani, H., composition of digitonin, 996.  
 Kiliani, H., and G. Düll, preparation of levulosecarboxylic acid, 596.  
 Kinzel, W., estimation of pyridine bases in gas liquor, 1349.  
 Kipping, F. S., action of phosphoric anhydride on fatty acids, *TRANS.*, 532, 980.  
 Kipping, F. S., and J. E. Mackenzie, *aa* - dimethyl - *aa* - diacetylpentane, *Proc.*, 1890, 116.  
 Kipping, F. S., and W. H. Perkin, jun., action of dehydrating agents on *aw* - diacetylpentane. Synthesis of methyl ethyl hexamethylene, *TRANS.*, 13.  
 ——— action of reducing agents on *aw* - diacetylpentane. Formation of dimethyl heptamethylene, *Proc.*, 1889, 145.  
 ——— derivatives of phenyl hexamethylene, *TRANS.*, 304.  
 ——— *aw* - diacetyl - *aw* - diethylpentane, *TRANS.*, 29.  
 Kirk, R., uroleucic acid and alcaptonuria, 188.  
 Kissling, R., estimation of nicotine in tobacco, 430.  
 Kitschelt, M. See Bamberger.  
 Klason, P., preparation of chlorine gas for laboratory purposes, 445.  
 Klatt, V., and P. Lenard, phosphorescence of copper, bismuth, and manganese in the sulphides of the alkaline earths, 201.  
 Klauber, A., xylylhydrazine, 1410.  
 Kleber, C. See Stohmann.  
 Kleeberg, F. See Comstock.  
 Klein, O.,  $\alpha$  - picolylfurylalkine and  $\alpha$  - pipecolylfurylalkine, 1437.  
 Klemp, G., valuation of zinc-dust, 1190.  
 Kliche, T., copper oxysulphides, 1211.  
 Klimenko, E., ethylenelactic acid from flesh extract, 235.  
 Klingemann, F., quantity of nitric oxide produced in the combustion of nitrogenous organic compounds with copper oxide, 292.  
 Klingemann, F. See also Japp.  
 Klinger, H., and J. Zuurdeeg, trinitroazoxybenzenes and trinitroazobenzenes, 761.  
 Klobb, T., compounds of ammonia with metallic permanganates, 947.  
 Klobukoff, N. v., cryoscopic behaviour of the aqueous solutions of the sugars obtained synthetically from formaldehyde, 465.  
 ——— influence of capillarity and diffusion on the solvent action of liquids, 555.  
 Klobukow, N., use of the induction spark for detecting traces of arsenic, 922.  
 Klüss, K. See Fock.  
 Knebel, W., derivatives of phenyl salicylate (salol), 1284.  
 Knierim, W., value of commercial foods, 395.  
 Knoblauch, O., estimation of ferrocyanide in gas-lime, 87.  
 Knöfler, O., new extraction apparatus, 663.  
 Kobbé, K. See Seubert.  
 Koch, A., occurrence of celestine and baryta near Torda, 713.  
 Koch, E., dibromo- and dichloroxylenes and their transformations by means of sulphuric acid, 1247.  
 Koch, H., action of ethyl chloracetate on benzenylamidoxime, 260.  
 Koch, K. R., spectra of gases at low temperatures, 313.



- Köhler, H., products of the distillation of coal tar, 463.
- Köhler, O., myrrh, 1317.
- König, E. See Behrend.
- Koenig, G. See Krafft.
- König, G. A., mazapilite, anhydrite, eleonorite, &c., from North America, 218.
- König, J., examination of acid and compressed fodders, and the estimation of total nitrogen therein, 1477.
- König, K.,  $\alpha$ -hydroxysulphonaphthoic acid, 636.
- Koenigs, W., formation of lepidine derivatives from chinine and cinchine, 1433.
- Koenigs, W. See also Busch, Erwig.
- Körner, G., and A. Menozzi, action of methylamine on ethyl maleate and fumarate, 869.
- Kohl, formation of calcium oxalate in plants, 191.
- Kohlrausch, K., action of methylhydrazine on dialdehydes and diketones, 24.
- Kohlrausch, O., and F. Strohmer, experiments with beetroot, 1022.
- Kohn, C. A., first synthetically prepared base isomeric with quinine, 523.
- test for glycerol, 1473.
- Koninck. See De Koninck.
- Koningh. See De Koningh.
- Kosmann, nature of steel, 215.
- Kossel, A., and K. Obermüller, new method of saponification, 1474.
- Kostanecki, S. v., azo-colours from naphtharesorcinol, 261.
- Kouriloff, V., terpenes from oil of *Pinus abies*, 789.
- Kovář, F., delvauxite and diadochite from Vysočany, Bohemia, 715.
- Kozioroffski, K., artificial production of rock-forming minerals, 718.
- Kraemer, G., and A. Spilker, coumarone in coal tar, 496.
- synthesis of chrysene and allied hydrocarbons, 515.
- Kraenker, J. See Fittig.
- Krafft, F., dibenzamide, 1289.
- dinaphthyl sulphides and dinaphthylsulphones, 1311.
- myristic aldehyde, 1234.
- Krafft, F., and L. Grosjean, hexadecylene bromide derivatives, 1218.
- Krafft, F., and G. Koenig, new series of tricyanides, 1252.
- Kramer, E., mucous fermentation, 76.
- Kraunhals, E., electrical conductivity of some solutions at temperatures between 18° and 100°, 676.
- Krause, A., note on the diamond, 1210.
- Krause, A., and V. Meyer, some vapour density determinations, 1365.
- Krause, A. H. See Mabery.
- Krause, H. v., the loss of nitrogen during the fermentation of nitrogenous organic matters, and the means for its prevention, 1340.
- Kraut, K., formation of glycocine from chloracetic acid, 1395.
- Kraut, K., W. Eschweiler, and G. Grossmann, formaldehyde, 1092.
- Krecke, F. See Paal.
- Krenner, J. A., pseudobrookite from Vesuvius, 712.
- Kritthchenko. See Petrenko-Kritthchenko.
- Kröber, T., derivatives of ortho- and para-tolubenzylamine, 968.
- Krohn. See Gruenhagen.
- Krüger, F., differences between arterial and venous blood in different blood vessels, 808.
- Krüger, M., betaines of pyridine bases, 1431.
- Krüss, G., and H. Moralt, beryllium, 697, 1375.
- Krüss, G., and K. Ohnmais, thiovanadates, 1381.
- Kühling, O., preparation and properties of certain pyrrolidone-derivatives, 793.
- Kühn, B., and N. Landau,  $\beta$ -dinaphthylcarbamide chloride, 634.
- $\beta$ -dinaphthylcarbamide chloride and  $\beta$ -tetranaphthylcarbamide, 1311.
- Kühn, B., and M. Liebert, preparation of phenyl cyanate, 962.
- Kühn, B., and O. Saeger, estimation of arsenic by Marsh's method, 1187.
- Kühn, M., estimation of fat in sour milk, 304.
- Kühne, W., silicic acid as a culture medium for organisms, 1338.
- Kühne, W., and R. H. Chittenden, neurokeratin, 807.
- Kühnlénz, F. A., a bottle for washing and absorbing gases, 288.
- Külz, E., compound of glycuronic acid, 1286.
- formation of glycogen in muscle with an artificial circulation, 1335.
- Külz, E., and A. E. Wright, phloridzin diabetes, 1337.
- Kuény, L., benzoyl derivatives of carbohydrates, &c., 578.
- Küster, F. See Zincke.
- Küster, F. W., freezing points of isomorphous mixtures, 1209.

- Kuh, F. See Freund.  
 Kuhara, M., specific volumes of camphor and borneol, 169.  
 Kuhlberg, A. v. See Bischoff.  
 Kuhlwein, A., formation of amidines, 371.  
 Kunz, G. F., fluor spar, opal, amber, and diamond, 337.  
 Kupferschlaeger, detection of free chlorine in hydrochloric acid, 289.  
 Kusserow, R., acids obtained by heating metahydrazobenzoic acid with stannous chloride, 778.  
 Kwasnik, W., use of calcium plumbate in the estimation of ash in food and drugs, 833.  
 Kym, O., aromatic carbamide chlorides, 633.  
 —  $\beta$ -dinaphthylcarbamide chloride and  $\beta$ -tetranaphthylcarbamide, 993.  
 — thio-derivatives of aromatic amines, 1306.  
 Kyritz, G. M., acid derivatives of orthoamidoquinoline, 1324.

## L.

- Lachaud, A., and C. Lepierre, double chromates, 1065.  
 Lachowicz, B., formation of benzald-oxime, 141.  
 — residual affinity of inorganic salts, 444.  
 Ladenburg, A., benzene formulæ, 881,  
 — conversion of tropidine into tropine, 1167, 1333.  
 — synthesis of oxypyridine and piperidine bases, 67.  
 — the second  $\beta$ -picoline and the constitution of pyridine and benzene, 1432.  
 Ladenburg, A., and C. Hundt, formation of optically active tropic acids and optically active atropines, 74.  
 Ladenburg, A., and J. Sieber, trimethylenimine, and a new synthesis of  $\beta$ -picoline, 1394.  
 Lainer, A., a new anhydrous double chloride of gold and potassium, 1217.  
 Landau, N. See Kühn.  
 Landolt, H., exact determination of the melting point of organic substances, 1.  
 — molecular refraction, 1.  
 Landrin, E. See Moissan.  
 Landsberg, L., displacement of the amido-group by the sulphonic group, 1137.  
 Langbein, H. See Stohmann.  
 Lange, G., estimation of cellulose, 303.  
 Lange, G., lignin, 228.  
 Langer, C. See Mond.  
 Langkopf, O., the estimation of fat in milk in dairies, 1346.  
 Langley, J. N., influence of nicotine and atropine on salivary secretion, 397.  
 Langley, J. N., and W. L. Dickinson, physiological action of pituri and nicotine, 1178.  
 Lapique, L., estimation of iron in blood, 297.  
 — quantity of iron in the spleen and liver of young animals, 185.  
 Lapique, L. See also Chabrie.  
 Lasne, H., analysis of natural phosphates, 293.  
 Lassar-Cohn, condensation of phenylenediamines with butaldehydes, 138.  
 Lauer, W. E., derivatives of propylamine, 1089.  
 Lauer, W. E. See also Gabriel.  
 Laves, E., oxidation of phenyl trithioformate, 988.  
 Lawes, Sir J. B., and J. H. Gilbert, the fixation of free nitrogen, 814.  
 Laycock, W. F., isophorone, 1235.  
 Lea, A. S., artificial and natural digestions, 536.  
 Lea, A. S., and W. L. Dickinson, action of rennin and fibrin-ferment, 1175.  
 Lea, M. C., allotropic forms of silver, 210, 334.  
 — darkened silver chloride not an oxychloride, 335.  
 Lebeau, P., estimation of free halogens and of iodides in presence of chlorides and bromides, 825.  
 Lebeau, P. See also Etard.  
 Le Bel, J. A., absence of rotatory power in amine salts, 228.  
 — constitution of petroleum, 223.  
 — derivatives of ammonium chloride, 475.  
 Le Blanc, M., amalgams, 1204.  
 — studies in chemical optics with reference to the dissociation theory, 313.  
 Lechartier, G., incineration of vegetable matter, 196.  
 Le Chatelier, H., electrical resistance of iron and its alloys at high temperatures, 549.  
 — equilibrium between hydrogen, chlorine, and oxygen, 8.  
 — expansion of silica, 1371.  
 Leclerc, A., estimation of starch in fodder, &c., 1197.  
 Lecrenier, A., electrolytic estimation of antimony, 421.

- Lecrenier, A., estimation of nickel by precipitation as sulphide, 297.
- Leduc, A., density of oxygen and hydrogen, and the composition of the air, 1370.
- Lefèvre, C., action of potassium and sodium arsenates on metallic sesquioxides, 1377.
- action of potassium and sodium arsenates on oxides of the magnesium series at high temperatures, 562.
- Léger, E., combination of camphor with phenols, 1427.
- Lehmann and Mori, poison of corn cockle seeds, 1458.
- Lehmann, C. See Zuntz.
- Lehmann, M., nitrouracil-derivatives, 32.
- Lehmann, O., electrolysis of mixed solutions, 317.
- electrolytic crystallisation and dimorphism of lead, 437.
- fluid crystals, 106.
- transfer of ions in fused and solid silver iodide, 317.
- Leicester, J., action of quinones on orthodiamines, orthonitranilines, and nitroparatoluidine, 1445.
- Leidié, E., rhodium nitrites, 1382.
- Lellmann, E., coniceïnes, 1328.
- Lellmann, E., and H. Boye, colouring matter from tetrahydroquinoline, 1005.
- intramolecular transformation between a diazo-salt and a phenol residue, 1116.
- Lellmann, E., and M. Büttner,  $\beta$ -methylpiperidine bases, 1003.
- piperidine bases, 1002.
- Lellmann, E., and A. Donner, constitution of the quinoxalines obtained from toluylenediamine and bromacetophenone, 524.
- phen- $\alpha$ -phenylparazoxime, 523.
- Lellmann, E., and F. Mack, dinitrodimethylamidodiphenylamine, 1410.
- Lellmann, E., and W. O. Müller,  $\gamma$ -conceïne, conyryne, and inactive conine, 802.
- Lemberg, J., formation of silicates, 113.
- Lemme, G., separation of bismuth from lead, 421.
- Lenard, P. See Klatt.
- Langfeld, F. See Bamberger.
- Lenk, H., eruptive rocks of the Rhone, 115.
- Lenz, W., discrimination of jute fibres from those of flax and hemp, 928.
- Lenze, F. See Freund.
- Leone, T., detection of cotton-seed oil in fats and in olive oil, 930.
- Leone, T., reduction of nitrates by micro-organisms, 1453.
- Leone, T., and A. Denaro, detection of blood stains, 840.
- Leoni, H. See Fittig.
- Lepetit, R., action of nitrogen iodide on some organic substances, 1402.
- Lepierre, C. See Lachaud.
- Lépine, R., presence in chyle of a ferment which destroys sugar, 810.
- Lépine, R., and Barral, destruction of glucose by blood and chyle, 1172.
- Leplay, H., behaviour of the hydroxides of calcium and the alkalis with sugars, 579.
- Lepsius, B., action of the electric arc on gaseous substances and its employment for demonstrations, 1047.
- lecture experiment for the demonstration of valency, 1050.
- Le Roy, G. A., detection of free chlorine in hydrochloric acid, 457.
- Lescœur, H., compounds which have a tension of dissociation equal to the vapour pressure of their saturated solution, 553.
- iodic acid, 106.
- Lespieau, R., nitration of propylbenzene, 962.
- Letellier, A., colouring matter of *Purpurella lapillus*, 1452.
- Leteur, F. See Geisenheimer.
- Letts, E. A., and R. F. Blake, benzylphosphines and their derivatives, 766.
- identity of Hofmann's dibenzylphosphine with tribenzylphosphine oxide, 492.
- Leuckart, R., action of ammonium formate on ketones, 783.
- aromatic mercaptans, 603.
- synthesis by means of phenyl cyanate, 759.
- Lévy. See Michel-Lévy.
- Levy, L., action of titanium chloride on metals, 1066.
- Levy, S., action of ammonia and ethylenediamine on tetrachlorodiacetyl, 475.
- Levy, S., F. C. Witte, and A. Curchod, derivatives of tetrachlorodiacetyl and tetrachloroacetone, 232.
- Levy, S. See Fittig.
- Lewkowitsch, J., estimation of glycerol in crude glycerol, 300.
- Benedikt's acetyl values, *Proc.*, 1890, 72, 91.
- Lezé, estimation of fat in milk, 837.
- Lezé, R., living motors and the theory of heat, 807.
- Liebermann, C., cinnamylcocaine from coca leaves, 76.

- Liebermann, C., isocinnamic acid, 620.  
 — isocinnamic and allocinnamic acids, 1417.  
 — occurrence of isocinnamic acid in the alkaloids of cocaine, 494.  
 — oxidation of ecgonine, 1449.  
 — theory of the truxillic acids, 1424.  
 Liebermann, C., and O. Bergami, truxene and truxone derivatives, 514.  
 Liebermann, C., and F. Giesel, by-products from the synthesis of cocaine, 647, 803.  
 Liebermann, C., and F. Haber, bidioxymethyleneindigo, 1140.  
 Liebert. See Kühn.  
 Liebmann, L. See Fittig.  
 Liebreich, O., the "dead space" in chemical reactions, 1207.  
 Limpricht, H., behaviour of aniline towards substitution derivatives of hydroxybenzoic acids at high temperatures, 158.  
 — hydrazobenzenedisulphonic acid, 987.  
 Limpricht, H., and v. Rechenberg, action of aniline on amidosalicylic acid, 158.  
 Linder, S. E., and H. Picton, hydro-sulphides, *Proc.*, **1890**, 50.  
 Lindet, L., extraction of raffinose from molasses and separation of raffinose from saccharose, 732.  
 — influence of carbonic anhydride on the products of fermentation, 281.  
 — presence of furfuraldehyde in commercial alcohols, 1400.  
 Lindsey, C. R. See Fasnacht.  
 Lindström, G., analysis of idocrase, 718.  
 Linebarger, C. E. See Long.  
 Ling, A. R., halogen derivatives of quinone, *Proc.*, **1890**, 33.  
 Linossier, G., and G. Roux, alcoholic fermentation and conversion of alcohol into aldehyde by champignons du muguet, 1179.  
 Lintner, C. J., diastatic ferment of ungerminated wheat, 650.  
 Lintner, C. J., and F. Eckhardt, diastase, 519.  
 Lipp, A.,  $\gamma$ -pentylene glycol and its anhydride, 20.  
 Lippmann, E., dithiocarboxylic acids of resorcinol and pyrogallol, 163.  
 Lippmann, E., and F. Fleissner, alkyl derivatives of 1-hydroxyquinoline, 174.  
 — — — derivatives of 1-hydroxyquinoline, 265.  
 — — — hydroxyquinolinesulphonic acids, 268.  
 Liveing, G. D., and J. Dewar, absorption-spectra of oxygen, 675.  
 Lloyd, F. J., milk of abnormal quality, *Trans.*, 201.  
 Lobach, W., anomalous rotatory dispersion in iron, nickel, and cobalt, 673.  
 Lodter, W. See Bamberger.  
 Löhr, R. See Baeyer.  
 Loew, O., catalytic formation of ammonia from nitrates, 689.  
 — elaboration of nitrates in the plant, 1182.  
 — formation of nitrous acid and ammonia from free nitrogen, 1051.  
 — formation of ozone during rapid combustion, 330.  
 — formation of volatile fatty acids from dextrose, 731.  
 — preparation of very active platinum black, 453.  
 Loew, O., and T. Bokorny, behaviour of the vegetable cell with very dilute alkaline silver solutions, 401.  
 Loewe, E., constitution of dinitro- $\beta$ -naphthol, 1424.  
 Loewenherz, R., molecular refraction of nitrates, 1201.  
 Loges, G. See Emmerling.  
 Loiseau, D., fermentation of raffinose by beer yeast, 22.  
 Long, J. H., circular polarisation of certain tartrate solutions, 313.  
 Long, J. H., and C. E. Linebarger, American fusel oil, 859.  
 Loof, G., estimation of morphine in opium, 1349.  
 — reactions of arsenic, 1343.  
 Lorenz, N. v., analysis of argol, 303.  
 Loschmidt, J., stereochemical studies, 602.  
 Lossen, W., formulæ for calculating the molecular volumes of organic compounds, 323.  
 Lovén, J. M., synthesis of aconitic acid from acetylenedicarboxylic acid, 237.  
 Lovibond, J. W., new method of colour analysis by means of the tintometer, 1461.  
 Lubarsch, O., absorption of gases by mixtures of alcohol and water, 103.  
 Lubavin, N., freezing of colloidal solutions, 685.  
 Lucas, L., hydrides of anthracene and phenanthrene, 637.  
 Lucchesi, A. See Antony.  
 Lucion, M. See Spring.  
 Lüdeking, C., prolonged action of the electric discharge on iodine, 687.  
 Lundström, C. H. See Sjögren.

- Lunge, G., detection of traces of nitrous acid, 415.  
 — estimation of sulphur in burnt pyrites, 193.  
 — estimation of sulphur in pyrites, 413.  
 — gas-volumetric analyses of potassium permanganate, bleaching powder, and manganese dioxide, 1468.  
 — precipitation of alumina and ferric oxide by ammonia, 420.  
 — the gasvolumeter, 660.  
 Lunge, G., and T. Wiernik, specific gravity of ammonia solutions, 107.  
 Lupke, R., rôle of potassium in plants, 917.  
 Lux, F., new gas balance, 823.  
 Luzzatto, G., natrolite from Monte Baldo, 114.  
 Lyons, R. E. See Van Nüys.

## M.

- Mabery, C. F., new method of preparing anhydrous aluminium chloride, 13.  
 Mabery, C. F., and A. H. Krause, action of aromatic amines on bromopropionic acid and on substituted acrylic acids, 371.  
 Mabery, C. F., and A. W. Smith, substituted acrylic and propionic acids, 27.  
 — — — sulphur compounds in raw petroleum and in petroleum residue, 350.  
 Macallan, J. See Cameron.  
 Macchiati, L., colouring matter of the cones of *Abies excelsa*, 641.  
 McCulloch, N., volumetric estimation of bromine in the presence of chlorine and iodine, 824.  
 MacFadyen, A. See Brunton.  
 MacFarlane, W. W., and P. S. Clarkson, action of chlorine on hæmatoxylin and logwood extract, 905.  
 Mach, E., production of the so-called sweet fodder, 82.  
 Mach, E., and K. Portele, detection and estimation of lactic and butyric acids in wines, 1344.  
 — — — fermentation and composition of cranberry juice, 1455.  
 Machado, J., ægirine, 344.  
 Mack, F. See Lellmann.  
 McKellar, W. G., convenient solution for use in titrating Weldon muds for manganese peroxide, 548.  
 Mackenzie, J. E. See F. Kipping.  
 Mackintosh, J. B., estimation of graphite in minerals, 923.  
 — native iron sulphates from Chili, 454.  
 Mackintosh, J. B. See also Hidden.  
 MacMunn, C. A., myohæmatin, 652.  
 Macnair, D. S., derivative of furfural and furil, 1245.  
 Maeckler, H. See Nietzki.  
 Maercker, M., effect of manuring with ammonium sulphate and with sodium nitrate, 287.  
 Magdeburg, G. See Vortmann.  
 Magnanini, G., absorption spectrum of nitrosyl chloride, 97.  
 — action of ammonia on dehydrodiacetyllevulinic acid, 864.  
 — aldol, 861.  
 — behaviour of mannitol towards boric acid, 1357.  
 — conversion of the homologues of indole into quinoline derivatives, 1322.  
 — emission spectrum of ammonia, 97.  
 — molecular weights of pyrroline derivatives, 906.  
 — molecular weights of the imidoanhydrides of pyrrolinecarboxylic and indolecarboxylic acids, 67.  
 Maisch, H. See Gattermann.  
 Maisch, H. C. C., preparation of boron, 331.  
 Maissen, P., and E. Rossi, estimation of nitrogen in ammonium magnesium phosphate, 291.  
 Malbot, heat of combustion of isodibutylene and isotributylene, 320.  
 Malbot, H., preparation of octyl chloride, 577.  
 — purification of amyl iodide, 116.  
 Mallard, E., lussatite, a new form of silica, 569.  
 — tridymite and chrysolite, 1070.  
 Mallet, J. W., atomic weight of gold, 708.  
 Maly, R., conversion of thiocarbamide into carbamide, 1399.  
 Manasse, P., lecithin and cholesterol in red blood corpuscles, 1017.  
 Mandel, J. A. See Friedburg.  
 Mangin, L., callose, a new fundamental substance in vegetable membrane, 734.  
 — influence of acids on the evolution of gases by plants, 190.  
 — intercellular matter, 656.  
 — pectic compounds in plants, 80.  
 Mann, C., detection and estimation of chlorine in thiocyanates, 663.  
 Maquenne, derivatives of  $\beta$ -pyrazole, 1439.  
 — eucalyptus honey, 122.

- Maquenne, fucosol, 33.  
 —  $\beta$ -inosite, 355.  
 — new sugar with an aromatic nucleus, 244.  
 — relation between sugars and furan derivatives, 33.  
 Maquenne, and C. Tanret, racemo-  
 inosite, 471.  
 Mar, F. W. See Gooch.  
 Marcet, W., human respiration, 914.  
 Marckwald, W., quinoline ring  
 formation: constitution of benzene, 1004.  
 Margottet, J. See Hautefeuille.  
 Marie, T., oxidation of cerotic acid by  
 nitric acid, 1237.  
 Marino-Zuco, F., a higher homologue  
 of cholesterolin, 757.  
 Mariutza, N., action of acids on  
 methylisopropenylcarbinol, 728.  
 Mariutza, N. See also Choupotsky.  
 Mark, v. d., estimation of alkaloids in  
 coca leaves, 310.  
 Markownikoff, derivatives of hepta-  
 methylene, 728.  
 Marquardt, A. See Einhorn.  
 Marsh, J. E., action of acids on litmus,  
 792,  
 — camphoric acids, 995.  
 — new monobromocamphor, TRANS.,  
 828.  
 Marsh, J. E., and R. Stockdale, the  
 production of camphor from turpen-  
 tine, TRANS., 961.  
 Marshall, T. R., and W. H. Perkin,  
 jun., acetyltrimethylenecarboxylic  
 acid, PROC., 1890, 137.  
 —  $\omega\omega$ -diacetylbutane, TRANS.,  
 241.  
 Martin, S., toxic action of the albu-  
 mose from jequirity seeds, 398.  
 Martin, S., and R. N. Wolfenden,  
 physiological action of the active  
 principles of jequirity, 398.  
 Marxow, E. Fleischl v., see Fleischl.  
 Mason, W. P., manganiferous spring  
 waters, 854.  
 Massol, G., lithium malonates, 1396.  
 — potassium hydrogen malonate,  
 quadromalonate, and quadroxalate,  
 740.  
 — silver malonate, 1397.  
 Massute, F., constituents of *Quassia*  
*amara* and *Picraena excelsa*, 791.  
 Matignon, C., heat of formation of  
 uric acid and alkaline urates, 1040.  
 Matignon. See also Berthelot.  
 Matthes, P., azo-derivatives of  
 secondary  $\beta$ -naphthylamines, 992.  
 — behaviour of  $\alpha\beta$ -dinaphthylamine  
 when combining with benzene, 385.  
 Matthey, E., liquation of gold and  
 platinum, 947.  
 Matzdorff, A.,  $\alpha$ -picolyethylalkine  
 and its derivatives, 1436.  
 Mauro, F., fluoroxy-salts of molyb-  
 denum, 702.  
 Mauzelius, R., 1:4-iodonaphthalene-  
 sulphonic acid, 168.  
 Mauzelius, R. See also Ekstrand.  
 Maxwell, W., soluble carbohydrates in  
 seeds of legumes, 917.  
 — sugar-yielding insoluble carbo-  
 hydrates in seeds, 544.  
 Maxwell, W. See also Schulze,  
 Wiley.  
 Mayer, A., combustibility of tobacco,  
 1458.  
 Mayer, F., qualitative analysis of the  
 ammonium sulphide precipitate, 84.  
 — preparation of ethylsulphonic acid,  
 748.  
 Mazzara, G., constitution of bromo-  
 nitrothymol, dinitrothymol, dinitr-  
 amidocymene, dinitrocymene, and the  
 isomeric chloro- and bromo-thymo-  
 quinones, 753.  
 — constitution of derivatives of carv-  
 acrol, thymoquinone, and thymol,  
 884.  
 — derivatives of bromothymol, 366.  
 — new hydroxythymoquinone, 965.  
 — thymol-derivatives, 602.  
 Mazzara, G., and E. Vighi, thymol  
 derivatives, 883.  
 Medicus, detection of salicylic acid in  
 wine, 1475.  
 Meissler, A. See Goldschmidt.  
 Meldola, formation of triazine deriva-  
 tives, TRANS., 328.  
 Meldola, R., and F. Hughes, a third  
 naphthoquinone, TRANS., 631.  
 — formation of indene-deriva-  
 tives from dibrom- $\alpha$ -naphthol, TRANS.,  
 393.  
 — note on the action of nitric  
 acid on dibrom- $\alpha$ -naphthol, TRANS.,  
 808.  
 Meldola, R., and F. W. Streatfeild,  
 researches on normal and mixed di-  
 azoamides, TRANS., 785.  
 Melikoff, P., and M. Feldmann,  
 hydroxycitraconic acid and its deriva-  
 tives, 29.  
 Melikoff, P., and Petrenko-Krit-  
 tchenko, chlorhydroxy-acids of the  
 fatty series, 736.  
 — derivatives of angelic and  
 tiglic acids, 862.  
 Mellin, E., triphenylbenzene, 1423.  
 Mellinshoff, W., paracyanobenzyl  
 chloride and its derivatives, 239.  
 Mendeléeff, D., dissociation of sub-  
 stances in solution, 325.  
 Menozzi, A. See Körner.

- Menschutkin, N., affinity coefficients of alkyl halogen compounds and of amines, 1366.
- Menschutkin, N. and M. Vasilieff. decomposition of acetic anhydride by water, 359.
- Merril, G. P., serpentine from Montville, New Jersey, 716.
- Merril, G. P. See also Clarke.
- Meslans, fluoroform, 724.
- Messinger, J., wet method for the estimation of carbon in organic substances, 1467.
- Messinger, J., and N. Pickersgill, reduction products of iodophenols, 1402.
- Messinger, J., and G. Vortmann, volumetric estimation of phenols, 1473.
- Messinger, J. See also Kehrman.
- Mester, B., cystinuria, 189.
- Meunier, J., benzoic acetals of sorbite, 730.
- conversion of glucose into sorbite, 1389.
- Meunier, S., chrome iron, 568.
- meteorite from Mighei, Russia, 346.
- meteorite from Phu-hong, 222.
- mineral waters of Malaisie and a tin mineral in process of formation, 1081.
- Meyer, E. v., benzoyl derivatives of acetonitrile, 1251.
- hydroxymetadiazines (hydroxypyrimidines), 68.
- source of error in the estimation of sulphuric acid, 1342.
- Meyer, G., derivative of boric and phosphoric acids, 108.
- Meyer, J. See Fischer.
- Meyer, L., nature of osmotic pressure, 441.
- Meyer, V., molecular weight of the desaurins, 1144.
- results and aims of stereochemical research, 719.
- Meyer, V. See Auwers, Demuth, Krause.
- Meyerhoffer, W., saturated solutions of compounds of cupric and potassium chlorides, 564.
- Meyerowitz, L. See Claisen.
- Mezger, K., cocaine chromate, 839.
- Michael, A., displacement of the sodium in ethyl sodiophenylsulphone-acetate by alkyls, 781.
- Michaelis, A., thiophenylmethylpyrazolone, 1269.
- Michaelis, A., and E. Godchaux, action of thionyl chloride on tertiary aromatic amines, 610.
- Michaelis, A., and B. Philips, ethyl thioacetacetate, 582.
- Michaelis, A., and J. Rabinerson, aromatic mercury compounds, 1269.
- Michaelis, A., and J. Ruhl, inorganic derivatives of phenylhydrazine, 617.
- Michel-Lévy and Munier-Chalmas, new forms of crystallised silica, 712.
- Milkowski, Z. v., estimation of starch in grain, 928.
- Miller, H. E. See Fittig.
- Miller, J. A., anisenyl-, salicenyl-, and methylsalicenyl-amidoximes, 144.
- Miller, W. v., regularities in the oxidation of quinoline derivatives, 1324.
- Miller, W. v., and G. Rohde, Étard's reaction, 978.
- hydrocinnamaldehyde, 97.
- synthesis of indene-derivatives, 1138.
- Minet, A., electrolysis of fused aluminium fluoride, 1040.
- electrolysis of fused aluminium oxide and fluoride, 552.
- Minguin. See Haller.
- Minkowski, O., absorption of fat, 1171.
- Minor, W., estimation of zinc in calamine, 418.
- Mintz, N. See Bischoff.
- Minunni, G., constitution of benzhydroxamic acid, 256.
- Minunni, G. See also Paternò.
- Mittelmeier, H. See Scheibler.
- Moerck, F., estimation of hypophosphites, 293.
- Moerk, F. X., testing for fixed oils, 200.
- Mohler, E., detection of benzoic acid in foods, 1031.
- detection of impurities in alcohol, 1472.
- Mohr, P., action of aniline on benzene hexachloride, 614.
- fat of bone marrow, 652.
- Moissan, H., action of fluorine on different forms of carbon, 557.
- carbon tetrafluoride, 944.
- colour and spectrum of fluorine, 329.
- density of fluorine, 208.
- platinum tetrafluoride, 217.
- Moissan, H., and E. Landrin, aricine, 803.
- Molinari, A., changes of glycogen, sugar, and lactic acid of the muscles while performing work, 185.
- Molisch, H., root excretions and their influence on organic matter, 656.
- Mond, L., and C. Langer, new form of gas-battery, 841.

Mond, L., C. Langer, and F. Quincke, action of carbonic oxide on nickel, *TRANS.*, 749.

Monnet, colouring matter of wines, 311.

Monnier, D. See Auriol.

Montgomery, J. W., obituary notice of, *TRANS.*, 453.

Moody, G. T., and T. G. Nicholson, paraxylenesulphonic acids, *TRANS.*, 958.

Moore, G. D. See Jackson.

Moore, I., condensation products of carbodiimides and orthodiamines, 246.

Moraht, H. See Krüss.

Morawski, T., estimation of glycerol, 299.

Morawski, T. See also Gläser.

Morgulis, E. See Vortmann.

Mori. See Lehmann.

Mori, Y. See Kellner.

Moritz, F., and W. Prausnitz, phloridzin diabetes, 1336.

Morley, E. W., carbon an impurity in hydrogen affecting determinations of its atomic weight, 1369.

Morpurgo, J., detection of nitrobenzene, 1194.

Morris, G. H. See Brown.

Morris, L. J. See Fittig.

Morse, H. N., and H. C. Jones, action of metallic cadmium on the halogen cadmium salts: cadmium sub-hydroxide and sub-oxide, 1376.

Mott, F. W., pernicious anæmia, 1177.

Mott, F. W., and S. A. Vasey, pernicious anæmia, 400.

Moullade, A., estimation of tannin by means of iodine, 1348.

Mourgues, mannitol hexachlorhydrin, 1388.

Moutier, J., combination of sodium and potassium with ammonia, 679.

Muck, F., estimation of alkalis in water, 299.

Mühlhäuser, O., Egyptian blue, 215.

Müller, H., chloro-substitution products of ethyl chloroformate, 1095.

— substituted anidoximes, 43.

Müller, H., and H. v. Pechmann,  $\alpha$ -ketoaldehydes, 51.

Müller, M., estimation of free oxygen in water, 412.

Müller, W. O. See Lellmann.

Müller-Erzbach, W., dissociation of salts containing water and the constitution of the combined water, 206.

Müntz, A., ammonia and the nutrition of plants, 287.

— decomposition of organic manures in soils, 1183.

— decomposition of rocks and formation of arable soils, 1183.

Müntz, A., function of ammonia salts in the nutrition of higher plants, 79.

— green manures as suppliers of nitrogen, 1184.

Münzing, L., compound of vanadic pentoxide with sulphuric acid, 336.

Mulder, E., action of sodium and potassium ethoxides on ethyl tartrate, 595.

Muller, J. A., carbonylhydroferrocyanic acid and carbonylferrocyanides, 116.

— dissociation of amine hydrochlorides and salts of the fatty acids in solution, 684.

— estimation of nitric acid by diphenylamine, 415.

— volumetric estimation of carbonates in arable soils, 417.

Munier-Chalmas. See Michel-Lévy.

Muraközy, K. v., vivianite from the Szentes artesian well, 714.

Muter, J., and L. De Koningh, analysis of fats and oils, 91.

Muthmann, W., messelite, a new mineral, 218.

## N.

Nagaoka, M. See Kellner.

Nasini, R., and A. Scala, the sulphines and the different valencies of sulphur, 1234.

Nasini, R. See also Paternò.

Nastvogel, O.,  $\alpha$ -anilidopropionic acid and  $\alpha$ -anilidobutyric acid, 1159.

— diphenyl- $\alpha\gamma$ -diethyl- $\beta\delta$ -diketopiperazines, 1160.

— isomerism of the diphenyl- $\alpha\gamma$ -dimethyl- $\beta\delta$ -diketopiperazines, 1160.

Nastvogel, O. See also Bischoff.

Naumann, A., stereochemical and mechanical views with reference to single and multiple union of atoms and the changes of one into the other, 555.

Nef, J. U., constitution of quinone, 1270.

— tautomeric compounds, 983.

Nelson, F. E., standard solution for Clarke's soap test, 198.

Nencki, L., methyl mercaptan as a constituent of human intestinal gases, 540.

Nencki, M. v., compounds of volatile fatty acids with phenols, 488.

— decomposition of albumin by anaërobic ferments, 78.

Nencki, M. v., and A. Rotschy, hæmotoporphyrin and bilirubin, 76.



Nencki, M. v., and N. Sieber, formation of paralactic acid during the fermentation of sugar, 78.  
 ——— gases evolved during the putrefaction of serum albumin, 78.  
 Nencki, M. v. See also Gressly.  
 Nernst, W., new principle of determining molecular weights, 1368.  
 ——— osmotic experiment, 1365.  
 ——— reciprocal influence on the solubility of salts, 3.  
 Neugebauer, A. See Tafel.  
 Neumann, A., substituted phthalimides and their conversion into the corresponding primary amines, 890.  
 Neumann, G. See Streintz.  
 Neumann, S., estimation of quinine in quinine tannate, 672.  
 Neumeister, R., reactions of albumoses and peptones, 804.  
 Neville, F. H. See Heycock.  
 Nichols, E. L., electrical resistance of the alloys of ferromanganese and copper, 1356.  
 Nicholson, T. G. See Moody.  
 Nickels, B., obituary notice of, *TRANS.*, 452.  
 Nicolaysen, C., Norwegian oil of caraway, 902.  
 Nicotera, L., synthesis of thymolcinamic acid, 892.  
 Niebling, R., artificial digestion of agricultural feeding stuffs, 1451.  
 ——— Kjeldahl's method of estimating nitrogen, 415.  
 Niementowski, S., some nitrated diazoamido-compounds, 39.  
 Niemilowicz, L., action of hydrobromic and sulphuric acids on primary alcohols, 465.  
 ——— tribromopropaldehyde and tribromopropionic acid, 861.  
 Nietzki, R., the formation of azines from orthodiamines and polyamines, 178.  
 Nietzki, R., A. Dietze, and H. Mäckler, Weselsky's resorcinol dyes, 156.  
 Nietzki, R., and O. Ernst, derivatives of diphenylamine and phenazine, 1114.  
 Nietzki, R., and H. Mäckler, resorcinol and orcinol colouring matters, 762.  
 Nietzki, R., and B. Pollini, nitro-toluidinesulphonic acids, 502.  
 Nietzki, R., and F. Rechberg, diamidoquinol ether and dihydroxyquinone ether, 967.  
 Nilson, L. F., amount of nitrogen in cows' milk, 652.  
 Nilson, L. F. See also Eggertz.

Noah, G., derivatives of diethylthiocarbamide, 1241.  
 Noël Paton. See Paton.  
 Noerdlinger, H., analysis of fats, 929.  
 ——— decamethylenedicarboxylic acid, 1237.  
 Nordenskjöld, O., cyanogen additive products of some amidoximes, 1120.  
 North, B. See Thorpe.  
 Noyes, A. A., exceptions to the gaseous laws in solutions, 442.  
 Noyes, W. A., atomic weight of oxygen, 1370.  
 Nüys. See Van Nüys.  
 Nyiredi, E., mean composition of the celestine bed of Koppánd, 713.

O.

Obermüller, reaction of cholesterin, 932.  
 Obermüller, K. See Kossel.  
 Oddy, R. W., and J. B. Cohen, comparison of the methods in use for estimating organic nitrogen, 1466.  
 Oebbeke, K., arsenical pyrites from Wunsiedel, 711.  
 Oelkers, L., occurrence of mercury in tape-worms, 396.  
 Ogle, J., gum tragacanth, 228.  
 Ogliastro, A., and G. Cannone, orthocresolglycollic acid, 375.  
 Ohnmais, K. See Krüss.  
 Oliveri, V., synthetical hydratropic acid, 375.  
 Oliveri, V., and A. Peratoner, supposed isomerides of pyromucic acid and of furfuraldehyde, 1242.  
 Oppenheim, R. See Rathke.  
 Oppenheimer, E., xlenylamidoxime and its derivatives, 49.  
 Ormandy, R., and J. B. Cohen, a new method for the estimation of nitrates and nitrites in water, *TRANS.*, 811.  
 Orndorff, W. R., parapropaldehyde and metapropaldehyde, 955.  
 Osmond, F., influence of certain foreign metals on the properties of steel, 566.  
 ——— influence of foreign substances on iron and steel: relation between their atomic volume and the allotropic modifications of iron, 567.  
 Ossipoff, I., ethyl  $\alpha\beta$ -diacetopropionate, 863.  
 ——— heat of combustion of organic isomerides, 680.  
 ——— heat of hydration of maleic anhydride, 680.

- Ost, H., estimation of sugars with copper potassium carbonate, 1031.
- Ostwald, W., electrical conductivity of distilled water, 1357.
- electrical properties of semi-permeable walls, 1354.
- O'Sullivan, C., arabinon, the saccharon of arabinose, *TRANS.*, 59.
- O'Sullivan, C., and F. W. Thompson, invertase: a contribution to the history of an unorganised ferment, *TRANS.*, 834.
- Otten, G. See Paa.
- Otto, A. See Wallach.
- Otto, R., behaviour of sodiophenylmercaptide with isobutylene bromide, 962.
- ethoxyacrylic acid from  $\alpha$ -dichloropropionic acid, 957.
- eukairite, from Argentine, 948.
- molecular weight of the solid  $\alpha$ -dichloropropionitrile, 726.
- sulphone derivatives, 379.
- Otto, R., and G. Hölst, action of phenylhydrazine on pyrocinchonic,  $\alpha$ -dichlor-symmetrical-dimethylsuccinic, and  $\alpha$ -dichloropropionic anhydrides, and on pyrocinchonic chloride, 1327.
- $\alpha$ -dichloro-substitution products of dimethylsuccinic acid, 957.
- Otto, R., and A. Rössing, preparation of sulphones, 780.
- displacement of the sodium in ethyl sodiophenylsulphonacetate by alkyl-radicles, 1137.
- Otto, R., and J. Tröger, products of the action of propionitrile on chlorides of the fatty acids: triethyl tricyanide, 726.
- Ouvrard, L., double phosphates of tin, titanium, and copper, 1379.
- phosphates of lithium, beryllium, lead, and uranium, 1055.
- Owen, F. A., estimation of indigotin for commercial purposes, 96.
- P.**
- Paal, C., and N. P. Braikoff, pyroline derivatives, 263.
- Paal, C., and M. Busch, synthesis of quinazoline derivatives, 71.
- Paal, C., and C. Hermann, propargylamine and derivatives of allylamine, 228.
- Paal, C., and A. Hoermann, ethyl diphenylacetacetate, 258.
- Paal, C., and T. Hoffmann,  $\gamma$ -ketonic acids, 1099.
- Paal, C., and F. Krecke, dihydroquinazolines, 1443.
- Paal, C., and G. Otten, derivatives of aromatic amines, 1415.
- Padberg, C. See Vortmann.
- Page, D., obituary notice of, *TRANS.*, 453.
- Pagliani, S., deductions from Van't Hoff's theory, 845, 1205.
- Pagnoul, A., loss and gain of nitrogen by soil, 1023.
- Pailhade. See De Rey Pailhade.
- Palmer, A. W., and C. L. Jackson, pentamidobenzene, 247.
- Panajotow, G., orthoparadimethylquinoline- $\alpha$ -aldehyde, 1158.
- Pappel, A., and H. D. Richmond, milk of the gamoose, *TRANS.*, 754.
- Parcus, E., and B. Tollens, multi-rotation of sugars, 1084.
- Parcus, E. See also Beythien.
- Parenti, C., coloration of organic substances by thiocyanic acid, 726.
- Parker, H. C., diparatolylene sulphoxide, 1136.
- Parker, G. See Fittig.
- Parsons, C. L., volumetric estimation of fat in milk, 92.
- Partheil, A., allyltrimethylammonium compounds, 356.
- volumetric estimation of iron in *ferrum reductum*, 827.
- Paschen, F., surface-tension of polarised mercury in different electrolytes, 552, 1036.
- Paschkis, H., and A. Smita, lobeline, 1169.
- Passmore, F. See Fischer.
- Patein, G., sulphines, 880.
- Paternò, E., behaviour of colloïd substances with respect to Raoult's law, 105.
- Paternò, E., and G. Minunni, derivatives of lapachic acid, 1310.
- Paternò, E., and R. Nasini, determination of molecular weights by Raoult's method, 725.
- Paternò, E., and A. Peratoner, the two diiodides of acetylene, 1219.
- Paton, D. Noël, human chyle, 394.
- proteids in urine, 1174.
- Patterson, H. J., estimation of fat in feeding stuffs, 930.
- Patterson, T. L., estimation of colouring matters by means of their absorption spectra, 1476.
- Pattinson, J., testing lard for cottonseed oil and beef stearin, 428.
- Paul, B. H., and A. J. Cownley, cinnamylecocaine in coca leaves, 310.
- Pavloff, C., physiological action of hyoscyne hydrochloride, 1019.

- Pawlewski, B., paraffin, 463.
- Pearce, R., supposed new mineral from Montana, 710.
- Péchar, E., phosphotrimetatungstic acid and its salts, 704.
- Pechmann, H. v., oxidation of  $\delta$ -methylethylethylene glycol, 1222.
- Pechmann, H. v., and F. Dahl, reduction products of 1:2-diketones, 1231.
- Pechmann, H. v. See also Müller.
- Pedler, A., action of chlorine on water in the light: action of light on certain chlorine acids, TRANS., 613.
- action of light on phosphorus: properties of amorphous phosphorus, TRANS., 599.
- explosion of hydrogen sulphide and of the vapour of carbon bisulphide with air and oxygen, TRANS., 625.
- Peirce, B. O., and R. W. Willson, measurement of the internal resistance of batteries, 315.
- Pellizari, G., compounds of alloxan with pyrazole bases, 645.
- Pembrey, M. S. See Haldane.
- Penfield, S. L., spangolite, a new mineral, 1073.
- Penfield, S. L. See also Genth.
- Percatoner, A. See Oliveri, Paternò.
- Perkin, W. H., jun., berberine. Part II. TRANS., 992.
- ethyl *aa*-diacetyladiate, TRANS., 204.
- preparation of catechol, TRANS., 587.
- Perkin, W. H., jun., and A. Schloesser, diphenylfurfuran, TRANS., 944.
- Perkin, W. H., jun., and J. B. Tingle, acetylcarbinol (acetol), PROC., 1889, 156.
- Perkin, W. H., jun. See also Kipping, Marshall.
- Perrey, A. See Hautefeuille.
- Perron, adulteration of milk, 428.
- estimation of lead in tin, 665.
- Pesci, L., new ammoniacal mercury compounds, and a new reaction for mercurammonium compounds, 1211.
- Petermann, A., the nitrogen question, 816.
- Peters, J. See Doebner.
- Peters, K. See Zulkowski.
- Peters, T., action of alcohols on ethyl acetoacetate, 1096.
- behaviour of ethereal salts of alkyl substituted acetoacetic acids with ammonia, 1097.
- Petersen, E., fluorine compounds of vanadium and its analogues, 15.
- heat of neutralisation of fluorides, 1.
- Petersen, E., neutralisation phenomena of aluminium and beryllium, 680.
- Petit, P. See Berthelot.
- Petrenko-Krittchenko. See Melikoff.
- Petri, R. J., reduction of nitrates by the cholera bacteria, 76.
- Pétricou, new method of chlorinating aromatic compounds, 882.
- Petrowitsch, M., lime in tanning materials, 312.
- Pettersson, O., estimation of carbonic anhydride, 1188.
- Pettersson, O., and A. Höglund, analysis of the atmosphere, 412.
- Pettersson, O., and A. Smitt, estimation of free and combined carbon in iron and steel, 1027.
- Pfeiffer, E., change in freshly-prepared solutions, 204.
- occurrence of hydrogen sulphide and sulphur in the Stassfurt salt deposits, 336.
- Pfeiffer, L. See Brandl.
- Pflüger, E., and L. Bleibtreu, estimation of urea, 308.
- Pflug, L., paraxylidine, 606.
- Philips, B. See Michaelis.
- Phomina, E., compounds of the euxanthone series, 389.
- $\alpha$ - and  $\beta$ -naphthylphenylene ketone oxide and methyl- $\beta$ -enylene ketone oxide, 901.
- Pichard, nitrogen in the soil, nitrification, fixation of atmospheric nitrogen, 545.
- Pickering, S. U., gradual alteration in glass produced by altering its temperature a few degrees, 440.
- nature of solutions as elucidated by the freezing points of sulphuric acid solutions, TRANS., 331.
- new form of mixing calorimeter, 440.
- the law of the freezing points of solutions, PROC., 1890, 9.
- the nature of solutions, 845.
- the nature of solutions as elucidated by a study of the density, electric conductivity, heat capacity, heat of dissolution, and expansion by heat of sulphuric acid solutions, TRANS., 64.
- the supposed hydrates of alcohol, 857.
- the theory of osmotic pressure, 846.
- Pickersgill, N. See Messinger.
- Pictet, A., properties of several anilides, 758.
- Pictet, A., and H. J. Ankersmit, phenanthridine, 390.
- Pictet, A., and J. Fert, action of zinc chloride on methylacetanilide, 1112.

- Picton, H. See Linder.  
 Pieszczyk, E., constituents of the bark of *Nerium oleander*, 1316.  
 Pigeon, L., heat of formation of platinum chloride, 439.  
 Pinner, A., action of benzamidine on ethyl acetylmalonate, 496.  
 — pyrimidines, 69.  
 Pinnow, J. See Will.  
 Piolti, G., cossaite from the Upper Susa Valley, 344.  
 Piotrowski, S., addition of chlorine and of halogen acids to oleic and elaidic acids, 1396.  
 Piutti, A., ethyl oximidosuccinates, 1239.  
 Planck, M., development of electricity and heat in electrolytes, 677.  
 — difference of potential between two dilute solutions of binary electrolytes, 1355.  
 Planta, A. v., nitrogenous constituents of the tubercles of *Stachys tuberosa*, 1183.  
 Planta, A. v., and E. Schulze, new crystalline carbohydrate, 1088.  
 Platts, J. C. See Cleaves.  
 Platz, B., estimation of zinc in iron ores, 1192.  
 Plessner, P., influence of temperature on the magnetism of salts of metals of the iron group, 678.  
 Plugge, P. C., mercury nitrate as a test for certain aromatic compounds, 669.  
 Pohl, J., precipitation of colloid carbohydrates by salts, 122.  
 Pohl, O., etherification by uranium salts, 727.  
 Pohl, O. See also Ráymán.  
 Poincaré, L., batteries with fused electrolytes and the thermoelectric forces at the surface of contact of metal and salt, 551.  
 — polarisation of electrodes, 933.  
 Poleck, T., oxysulphides of mercury, 109.  
 — safrole, 136.  
 Poleck, T., and K. Thümmel, vinyl alcohol a constant constituent of ethyl ether, 118.  
 Polenske, E., rapid method of estimating arsenic, 83.  
 Polis, A., tin tetraphenyl, 166.  
 Politis, J. See Fittig.  
 Pollard, W. See Seubert.  
 Pollini, B. See Nietzki.  
 Pollitz, G. See Claus.  
 Pomeranz, C., methysticin, 257.  
 — phenol contained in sassafras oil, 1111.  
 Popoff, M., influence of cooking on the digestion of beef and fish, 1450.  
 Poppe, O., formation of dibenzyl derivatives, 504.  
 — metaxylylmalonic acid, 498.  
 Portele, K. See Mach.  
 Posselt, M. See Claus.  
 Potilitzin, A., properties of sodium perchlorate: supersaturated solutions, 333.  
 — strontium chlorate and its decomposition by heat, 696.  
 — supersaturated solutions, 327.  
 Pott, R., the Fokker-Salkowski method of estimating uric acid in normal and pathological urines, 304.  
 Prager, B., aromatic substituted pseudothiocarbamides, 159.  
 Prausnitz, G., methylethylpyridylalkine, 1436.  
 Prausnitz, W., formation and fate of glycogen, 810.  
 Prausnitz, W. See also Moritz.  
 Preis, K., arsenic compounds, 1053.  
 — estimation of phosphoric acid in the presence of silica, 825.  
 — potassium silicofluoride, 694.  
 Prendel, R., wilnite, 220.  
 Presch, W., behaviour of sulphur in the organism: detection of thio-sulphuric acid in the urine, 812.  
 Procter, H. R., Gantter's method of estimating tannin, 1477.  
 Prud'homme, nitroprussides, 1387.  
 Prunier, action of sulphides on chloral and chloroform, 291.  
 Prunier, L., simultaneous estimation of sulphur and carbon, 290.  
 Pullinger, F., action of zinc on dilute sulphuric acid, TRANS., 815.  
 Purgotti, A., organic sulphuretted compounds, 1419.

## Q.

- Quenot, J. See Aubin.  
 Quincke, F. See Mond.

## R.

- Rabinerson, J. See Michaelis.  
 Racine, carbonic oxide detector, 194.  
 Rammelsberg, C., new case of isomorphism of uranium and thorium, 15.  
 Ramsay, W., nitrogen trioxide and peroxide, TRANS., 530.  
 Raoult, F. M., and A. Recoura, vapour pressures of solutions in acetic acid, 554.

- Rasch, H. See Fittig.  
 Raschen, J. See Japp.  
 Rathke, B., melamine, 1082.  
 Rathke, B., and R. Oppenheim, triphenylguanlythiocarbamide and dicyanodiamide, 1125.  
 Raudnitz, R. W., digestibility of boiled milk, 650.  
 Raulin, J., estimation of potassium and humus in soils, 668.  
 Raumer, E. v., an unfermentable dextrorotatory constituent of honey, 356.  
 Rayleigh, Lord, composition of water, 330.  
 Ráyman, B., and O. Pohl, rhamno-diazine, 355.  
 Rebufatt, O., amido-acids, 621.  
 Rechberg, F. See Nietzki.  
 Rechenberg, v. See Limpricht.  
 Recoura, A., isomeric forms of chromic bromide, 1063.  
 — preparation of hydrobromic acid, 687.  
 Recoura, A. See also Raoult.  
 Redzko, V., derivatives of stilbene and isostilbene, 783.  
 Reformatsky, A., linoleic acid, 362.  
 Reformatsky, S., action of bromine on trimethylacetic acid, 1096.  
 — first oxide of the pentahydric alcohol from diallylcarbinol, 353.  
 — first oxide of a tetrahydric alcohol from diallylcarbinol, 354.  
 — synthesis of some glycerols by means of hypochlorous acid, 120.  
 Reicher, L. T., and C. M. van Deventer, thermal behaviour of cupric chloride solutions, 1206.  
 Reicher, L. T. See also van Deventer.  
 Reichl, new reactions of albumins, 1350.  
 Reichold, A., phenylparatolylamine, 609.  
 Reichwald, R., fumarine, 272.  
 Reid, E. W., osmosis with living and dead membranes, 277, 1176.  
 Reinhardt, C., estimation of chromium and copper in iron and steel, 85.  
 — estimation of iron by means of potassium permanganate in hydrochloric acid solutions, 296.  
 — filter holder for drying and weighing, 193.  
 — rapid gravimetric estimation of sulphur in iron and steel, 1464.  
 — volumetric estimation of chromium in chrome iron ore, 298.  
 Reinitzer, F., estimation of lupulin in hops, 431.  
 Reinitzer, F., nature of gum ferment, 998.  
 — physiology of the tannins, 186.  
 Reis, M. A. v., estimation of arsenic in iron, 194.  
 Reisse, E., decomposition products of the sodium salts of the chlorolactic acids, 1097.  
 Reissert, A., citraconanil and pyranil-pyrrolactone, 1102.  
 — melting points of organic compounds, 1204.  
 — pyridine and pyrroline derivatives from anilidopyrotartaric acid, 642.  
 Reissert, A., and W. Kayser, action of phenylhydrazine on the hydroxy-acids and their ethyl salts, 155.  
 Reitmair, O., "citrate" method of phosphoric acid estimation, 416.  
 — estimation of calcium in presence of phosphoric acid, iron, aluminium, and manganese, 417.  
 Remse, P. See Freund.  
 Remsen, I., and W. M. Burton, action of acids on benzoic sulphinide, and analysis of "saccharin," 94.  
 Renard, A., estimation of the indigo in dyed fabrics, 931.  
 — phenyldithienyl, 1420.  
 — phenylthiophen, 134.  
 Retgers, J. W., isomorphism, 328, 1208.  
 Reuland, J., derivatives of diphenyl-ine, 166.  
 Reuter, F. See Anschütz.  
 Reuter, L., constituents of *Urtica urens*, *U. dioica*, and *U. pilulifera*, 545.  
 Revelli. See Bellario.  
 Reverdin, F., and C. de la Harpe, analysis of methylanilines, 430.  
 Rey, H. See Heumann.  
 Ribalkin, M., chemical equilibrium between hydrogen chloride and hydrogen in conjunction with metals, 685.  
 Riban, J., estimation of zinc in presence of iron and manganese, 1193.  
 Ricciardi, L., diffusion of alumina in plants, 818.  
 Richardson, A., action of light on moist oxygen, *Proc.*, 1889, 134.  
 — sealing tubes under pressure, 941.  
 Richarz, F., galvanic polarisation of platinum electrodes in dilute sulphuric acid with high current density, 676.  
 — polarisation of platinum electrodes in dilute sulphuric acid, 551.  
 Richmond, H. D., estimation of soluble and insoluble fatty acids in butter, 93.

- Richmond, H. D., extraction of fat from milk solids, 91.
- Richmond, H. O. See also Pappel.
- Richter, E., derivatives of the two isomeric naphthénylamidoximes, 62.
- reactions of carbonic oxide blood, 1200.
- Rideal, S., colorimetric estimation of nitrates in potable waters, 831.
- Riechelmann. See Fittig.
- Rilliet, A. A. See Soret.
- Rimbach, E., correction of thermometric readings for the column outside the heating medium, 205.
- Ringer, S., influence of inorganic salts on development, 393.
- Ringer, S., and H. Sainsbury, influence of salts on clotting, 1176.
- Ritschke, A. See Gattermann.
- Ritsert, E., testing acetanilide, 1349.
- Roberts, W., Pfeiffer's test for latent gout, 401.
- uric acid, 540.
- Robin, A., determination of potassium hydrogen tartrate in urine, 187.
- Robineau, F. See Soret.
- Robinson, H. H. See Thorpe.
- Robinson, W. S. See Jackson.
- Röders, P. See Fittig.
- Rössing, A., analogy of ketonic acids to sulphonocarboxylic acids, 781.
- Rössing, A. See also Otto.
- Röttger, H., examination of wax, 429.
- Rohde, G. See Miller.
- Rolleston, H. D., temperature in nerves, 536.
- Romanis, R., obituary notice of, *TRANS.*, 455.
- Rommier, A., effect of copper salts on elliptical yeast, 814.
- influence of yeast on the bouquet of wines, 281.
- preparation of wine yeasts, 1179.
- Ronalds, E., obituary notice of, *TRANS.*, 456.
- Roode. See De Roode.
- Roos, L. Cusson, and Giraud, volumetric estimation of tannins in wines, 431.
- Roozeboom, H. W. B., combination of alkali metals with ammonia, 450.
- solution equilibrium of thorium sulphate and its hydrates, 686.
- sudden changes in the solubility of salts caused by the formation of two layers in the liquid, 4.
- Rosell, Y. See Goldschmidt.
- Rosenbach, O., occurrence and detection of indigo-red in urine, 1032.
- Rosenberg, A. See Freund.
- Rosenthal, E., homoterephthalene-diamidoxime and its derivatives, 147.
- Rosenthal, J., calorimetric investigations on foods, 182.
- Roser, W., narcotine, 528.
- Rossi, E. See Maissen.
- Rossolymo, A. See Gattermann.
- Rothschild, F. W., derivatives of amidocinnamic acid, 1123.
- Rotschy, A. See v. Nencki.
- Rousseau, G., crystallised basic cupric nitrate, 1376.
- crystallised ferric oxychloride, 1063.
- formation of crystallised metallic oxychlorides: copper oxychlorides, 1058.
- Roux, G. See Linossier.
- Roux, L. See Barbier.
- Roy. See Le Roy.
- Rozański, B., isomeric dinitropara-toluic acids, 52.
- Rückel, J. See Eckenroth.
- Rüdorff, F., constitution of solutions, 1044.
- Ruffle, J., modified "Orsat" apparatus, 411.
- Rufi, H. See Bondzynski.
- Ruhemann, S., action of chloroform and alcoholic potash on hydrazines, *TRANS.*, 50.
- constitution of citrazinamide, 736.
- mucic acid. Part III. Hydromuconic acid, *TRANS.*, 937.
- Ruhemann, S., and F. F. Blackman, mucic acid. Part I. Hydromuconic acid, *TRANS.*, 370.
- Ruheman, S., and W. J. Elliott, mucic acid. Part II. Action of phosphoric chloride on mucic acid, *TRANS.*, 931.
- Ruhl, J. See Michaelis.
- Runschke, G. See Claus.
- Rupe, H. See Baeyer.
- Ruppel, W. See Claus.
- Rydberg, J. R., structure of the line spectra of the elements, 674.

## S.

- Sabanéeff, A., cryoscopic investigation of colloids, 1215.
- Sachse, H., derivatives of dianthryl, 638.
- geometrical isomerides of the hexamethylene-derivatives, 1386.
- Saeger, O. See Kühn.
- Sainsbury, H. See Ringer.

- Saint-Pierre, O. See Hanriot.
- Sakurai, J., molecular volumes of aromatic compounds, 683.
- Salet, G., blue flame produced by common salt in a coal fire, 360.
- Salvatori, S., examination of butter, 305.
- Sandberger, F. v., arsenical pyrites, 454.
- new meteorite from Chili, 347.
- Sandmeyer, T., diazobenzene: a correction, 1115.
- Sankey, H. R., resistance of electrolytic cells, 317.
- Sannino, A. See Sostegni.
- Saupe, M., estimation of the fatty acids in soap, 1475.
- Scala, A. See Nasini.
- Schäfer, E. A., is free hæmoglobin present in the blood plasma of the splenic vein?, 1016.
- Schall, C., determination of vapour-density, 681, 1042.
- Schall, C., and C. Dralle, brazilin, 996.
- Scharfenberger, O. See Anschütz.
- Scheibler, O., and H. Mittelmeier, melitriose and melibiose, 226, 1085.
- Schenke, V. See Jacobson.
- Scherpenberg, P. A. v., behaviour of bismuth with sulphur and selenium, 216.
- Schettlik, B., technical analysis of commercial sodium sulphide, 84.
- Schiff, H., constitution of filicic acid, 162.
- mercurobenzamide, 1123.
- Schiff, H., and A. Vanni, benzidine, 1297.
- — fluorescent derivatives of aromatic diamines, 138.
- — toluyleneurethane and toluyleneoxamethane, 1124.
- Schiff, S. See Willgerodt.
- Schlagdenhauffen, magnesia in sodium and hydrogen calcium phosphates, 664.
- Schloesing, T., absorption of ammonia from the air by vegetable soils, 821.
- fermentation of manure in absence of oxygen, 282.
- nitrification of ammonia, 282.
- vegetable soils and atmospheric nitrogen, 822.
- Schloesing, T., jun., the atmosphere in soils, 81.
- Schloesser, A. See Perkin.
- Schmeisser, W. See Claus.
- Schmidt, A. See Fittig.
- Schmidt, C., action of potassium phthalimide on halogen compounds containing oxygen, 372.
- Schmidt, E. and F., alkylhydrastines and their derivatives, 1167.
- Schmidt, E., and W. Kerstein, berberis alkaloids, 648.
- Schmidt, G. C., change of volume on dissolving salts in water, 844.
- Schmidt, M., action of sulphurous anhydride on nitroso-compounds, 1305.
- Schmitter, A. G., source of nitrogen of plants, 1023.
- Schmitz-Dumont, W. See Friedheim.
- Schmunk, L. See Zincke.
- Schneegans, vanillin from *Rosa canina*, 1270.
- Schneegans, A. See Fittig.
- Schneider, A., Damascenine from *Nigella Damascena*, 1317.
- inosite from Dillenber, 345.
- manganese ores from Dillenburg, 459.
- Schneider, E. A., relation of the hydrated sesquioxides to the salts of iron and aluminium, 946.
- relative basicity of the hydrated sesquioxides of iron and aluminium, 1062.
- Schneider, E. A. See also Clarke.
- Schneider, L., water of crystallisation, 1209.
- Schneider, R., artificial copper-bismuth glance, 337.
- artificial silver-bismuth glance, 710.
- Schoen, G. A., estimation of paratoluidine, 839.
- Schönbrodt, R., derivatives of ethyl acetoacetate, 27.
- Schöpf, M., orthonitrodiphenylamine and its derivatives, 1113.
- substitution of the anilido-group for a halogen atom in the benzene nucleus, 374.
- Schröder, G., cobalt and nickel oxides, 1213.
- Schroeder, W. v., formation of urea in the dog-fish, 1451.
- Schroeter, G., orthocresolbenzene, 898.
- Schroeter, H. J. M. See Trimble.
- Schryver, S. B. See Collie.
- Schubart, L. H., action of carbon bisulphide on the potassium compound of parahomobenzylamidoxime, 49.
- para- and ortho-homobenzylamidoxime and their derivatives, 47.
- Schütt, F., determination of the molecular refraction of solid compounds in their solutions, 1033.
- pigments of *Peridinia*, 1172.

- Schütze, R., animal cellulose, 227.  
 Schuftan, A., metanitro-*a*-stilbazole, its reduction products and anisylidenepyridylalkine, 1437.  
 Schulten. See De Schulten.  
 Schultz, G.,  $\alpha$ -naphthylamine- $\epsilon$ -sulphonic acid, 388.  
 Schultze, B., precipitation of tin from acid solutions by metallic iron, 853.  
 Schultze, E., nitrogenous constituents of human urine, 280.  
 Schulze, E., chemical composition of vegetable cell membranes, 1456.  
 — cholesterol in plants, 1457.  
 — effect of feeding, on the secretion of amidic substances, 278.  
 — formation of cane-sugar in etiolated plant shoots, 282.  
 — isocholesterin, 1474.  
 Schulze, E., and E. Steiger, non-nitrogenous reserve substances of the seeds of *Lupinus luteus*, 284.  
 Schulze, E., E. Steiger, and W. Maxwell, vegetable cell membranes, 283.  
 Schulze, E. See also Planta.  
 Schulze, J. See Alt.  
 Schuster, M., and H. v. Foullon, andesine from Bodenmais, 344.  
 Schutzenberger, P., condensation of benzene and acetylene under the influence of the silent discharge, 961.  
 — condensation of carbonic oxide, 692.  
 — condensation of carbonic oxide under the influence of the silent discharge, 691.  
 — effects of the silent discharge, 1358.  
 Schwarze, R., polymerisation of nitriles: cyanalkines, 1158.  
 Schwechten, E., isomeric dichlorobenzaldehydes and naphthols derived therefrom, 619.  
 Scofield, H. See Haycraft.  
 Seamon, W. H., zinciferous clays of south-west Missouri, 573.  
 Sebelien, J., peptone and similar substances, 182.  
 Seidel, P., formation of triphenodioxazine by the oxidation of orthamidophenol, 499.  
 Seifert, R., behaviour of aniline with substituted hydroxybenzoic acids at a high temperature, 490.  
 Selitrenny, L., decomposition of gelatin by anaërobic ferments, 543.  
 Sell, amyl alcohol in brandy from different parts of the German Empire, 1388.  
 Selle, F., alkaloïds of the root of *Stylophoron diphyllum*, 649.  
 Sembritzki, F., succinenediamidoxime, 125.  
 Semmler, F. W., Indian geranium oil, 951.  
 — nutmeg oil and mace oil, 1150.  
 Sempotowski, L., isomeric derivatives of ethylbenzene, 54.  
 Senderens, J. B., new hydrate of potassium hydrogen sulphate, 450.  
 Sênkowski, M., trimethylphenylmethane, 1296.  
 Serno, nitric acid in plants, 1021.  
 Sestini, F., and L. Sestini, ammoniacal fermentation of uric acid, 1399.  
 Setlik, B., analysis of wolframite and scheelite, 420.  
 — estimation of sulphuric acid in fuming sulphuric acid, 414.  
 Seubert, K., physical constants of halogen substitution products of benzene and toluene, 2.  
 Seubert, K., and K. Kobbé, double salts of rhodium, 1383.  
 Seubert, K., and W. Pollard, vapour density and melting point of cyanogen iodide, 949.  
 Seyewitz, A., dihydroxydiphenylamine, 369.  
 — metaphenylenediamine from resorcinol, 245.  
 Seyfriedsberger, G., mercury sulphates from a furnace at Idria, 710.  
 Shenstone, W. A., improved vacuum joints and taps, TRANS., 958.  
 Sherrington, C. S. See Cope-mann.  
 Sidersky, D., apparatus for drying substances in a partial vacuum, 1185.  
 Sieber, J., diethylenediamine, 476.  
 Sieber, J. See also Ladenburg.  
 Sieber, N. See v. Nencki.  
 Siebert, C., constituents of *Anisodus luridus*, 658.  
 — constituents of *Scopolia atropoides*, 658.  
 Siegfried, M., ethylenelactic acid, 128.  
 Sienecki, A. See Bischoff.  
 Sigmund, W., fat-decomposing ferments in plants, 1455.  
 Silber, P. See Ciamician.  
 Sjögren, A., and C. H. Lundström, barysite, a new lead silicate, 456.  
 Sjögren, H., the Transcaspian naphtha district, 115.  
 Skraup, Z. H., conversion of maleïc acid into fumaric acid, 1397.  
 — kynurin, 174.  
 — phloroglucinol, 136.  
 Skraup, Z. H., and D. Wiegmann, codeïne methiodide, 179.



- Smita, A. See Paschkis.
- Smith, A., desylacetophenone, *TRANS.*, 643.
- Smith, A. P., violet flame produced by common salt in a coal fire, 1202.
- Smith, A. W. See Mabery.
- Smith, E. F., electrolysis of metallic phosphates, 1028.
- oxidation of sulphides by the electric current, 1342.
- vanadium in potassium hydroxide, 706.
- Smith, E. F., and L. K. Frankel, electrolytic separations, 664, 1029.
- Smith, E. F., and H. F. Keller, electrolytic estimation of palladium, 831.
- Smith, F., chemistry of the urine of the horse, 914.
- respiration in the horse during rest and work, 392.
- Smitt, A. See Pettersson.
- Smolka, A., constitution of the derivatives of cyanamide, 1222.
- Smolka, A., and A. Friedreich, ammeline, 856.
- — phenylammeline and phenylisocyanic acid, 618.
- Snow, H. W., iodine absorption as a test for essential oils, 307.
- testing oil of peppermint for adulterations, 199.
- Soave, M. See Giacosa.
- Söderbaum, H. G., orthamidobenzyl alcohol, 1254.
- Söderbaum, H. G., and O. Widman, derivatives of orthamidobenzyl alcohol, 178.
- — phenylorthobenzylenediamine and paratolylorthobenzylenediamine, 1258.
- Soldaini, E., copper solution for the estimation of glucose, 198.
- Soret, J. L., and A. A. Rilliet, absorption of ultra-violet rays by derivatives of the paraffins, 434.
- Soret, L., and F. Robineau, nickel-oxydiamine nitrite, 216.
- Sostegni, L., and A. Sannino, formation of hydrogen sulphide during the alcoholic fermentation, 1454.
- Sowano, J. See Kellner.
- Spallanzani, P., volatile fatty acids of butter, 186.
- Speranski, influence of glass surfaces on velocity of reaction, 1208.
- Speyers, C. L., electromotive force of metallic salts, 843.
- Spiegel, L., constitution of fichtelite, 385.
- estimation of nitric acid, 1025.
- Spilker, A., nitrogen compounds of salicylic acid, 141.
- Spilker, A. See also Kraemer.
- Spiro, K. See Wislicenus.
- Spitzer, A., methyl-derivatives of phloroglucinol, 1110.
- tetramethylphloroglucinol, 1407.
- Sprague, C. See Buchka.
- Spring, W., increase of chemical energy at the free surface of liquid substances, 328.
- rate of solution of carbonates in acids, 843.
- rate of solution of Iceland spar in hydrochloric acid, 843.
- Spring, W., and M. Lucion, constitution of manganese peroxide, 566.
- Spring, W., and E. Tart,  $\alpha$ -dichloropropaldehyde, 955.
- Squibb, E. R., valuation of crude cocaine from Peru, 838.
- Srpek, O., hydroquinoline derivatives, 177.
- Stadelmann, E., proteinchrome and proteinchromogen, 804.
- Staedel, W., and E. Haase, derivatives of diphenylmethane and benzophenone, 1422.
- Stahel, R., derivatives of diphenylhydrazine and methylphenylhydrazine, 1259.
- Stahl, J., ethylxylenes, 882.
- Stahl, W., estimation of zinc in blende containing manganese, 827.
- Stark, A. C., test for antipyrin, 309.
- Stas, J. S., silver, 561.
- Stavely, W. W., examination of crude phenol and cresol, 425.
- Stead, J. E., estimation of minute quantities of aluminium in iron and steel, 548.
- gas sampling and testing apparatus, 411.
- Steiger, E. See Schulze.
- Stein, G., double fluorides of antimony, 216.
- Steinecke, V., leucitophyre from Persia, 220.
- Stellwaag, A., composition of fats of fodders, 657.
- Stieglitz, J., behaviour of amidoximes towards diazobenzene-derivatives, 254.
- Stillmann, T. B., composition of boiler scale, 944.
- Stillmark, H., ricin, 535.
- Stockbridge, E., lupulin, 657.
- Stockdale, R. See Marsh.
- Stockman, R., and D. B. Dott, physiological action of morphine and its derivatives, 1178.
- Stohmann, F., C. Kleber, and H. Langbein, thermochemistry of methyl alcohol and solid methyl salts, 100.

- Stokes, A. W., rapid estimation of fat in milk, 304.
- Stoklasa, J., monocalcium phosphate, 635.
- recognition of phosphoric acid of mineral origin, 83.
- Stolba, F., ammonium borofluoride, 560.
- Stone, W. E., carbohydrate in peach gum, 1022.
- carbohydrates of the sweet potato, 1022.
- composition of cultivated strawberries, 659.
- Storch, V., changes in milk by udder tuberculosis, 652.
- Stortenbeker, W., estimation of iodine, 1185.
- Strache, H., oxidation products of quinoidine, 179.
- pyridineorthocarboxylic acids, 1157.
- Strache, H. See also Goldschmiedt.
- Strasser, L. See Bamberger.
- Strassmann, H., indazole derivatives, 781.
- Streatfeild, F. W. See Meldola.
- Streintz, F., a silver mercury cell and its relation to temperature, 550.
- theory of the secondary battery, 315.
- Streintz, F., and G. Neumann, theory of secondary batteries, 1354.
- Strohmer, F. See Kohlrausch.
- Stuffer, E., decomposition of sulphones, 987.
- Stutzer, A., action of dilute hydrochloric acid and of pepsin with hydrochloric acid on the digestible albumin of fodders, 651.
- artificial digestion of proteids, 275.
- effect of "saccharin" on the digestion of albuminoids, 1450.
- Suida, W., derivatives of ethylbenzene, 134.
- Sülc, O., molecular weights of some acids of the oleic series, 737.
- Sworn, S. A., constitution of the aromatic nucleus, 238.
- Symons, W. H., detection of sodium in lithium carbonate, 547.
- Symons, W. H. See also Gerrard.
- Szamatólski. See Friedheim.
- Tafel, J., strychnine, 1447.
- Tafel, J., and C. Enoch, formation of alkyl derivatives of amides, 491, 973.
- Tafel, J., and A. Neugebauer, dimethylpyrrolidine and diamidohexane, 1000.
- Taffe, H., rapid method for the analysis of tallow, 305.
- Takahashi, D., scutellarin, 64.
- Tammann, G., hydrogen peroxide, 106.
- Tanatar, S., action of alcoholic potash on bromosuccinic acid, 1238.
- thermochemical data respecting succinic and isosuccinic acids, 320.
- Taniguti, K., analysis of urine, 1199.
- Tanret, C., sugar from the quebracho, 226.
- Tanret, C. See also Maquenne.
- Tart, E. See Spring.
- Tassel, E., combination of phosphorus pentafluoride with nitrogen peroxide, 1052.
- Tate, G., estimation of minute quantities of gold, 830.
- Täuber, E., some new diphenyl-derivatives, 782.
- Tchajetchinsky, M., serpentine from Finland, 715.
- Tchernay, N. A., dilatation of salt solutions, 318.
- Teed, F. L., Clarke's soap test, 421.
- Terreil, A., melting and solidifying points of fats and their mixtures, 929.
- Thiele, J., automatic apparatus for evolving gases from liquids, 6.
- detection and estimation of antimony and arsenic, 1193.
- preparation of chlorine in a Kipp's apparatus, 6.
- preparation of nitric oxide, 9.
- Thierfelder, H., identity of brainsugar with galactose, 121.
- Thompson, C. See Wright.
- Thoms, H., ethoxycaffeine, 1166.
- zinc ammonium compounds, 452.
- Thomson, J. J., passage of electricity through hot gases, 1037.
- Thorpe, T. E., and B. North, diethylphosphorus acid, *TRANS.*, 634.
- Thorpe, T. E., and H. H. Robinson, frangulin, *TRANS.*, 38.
- Thorpe, T. E., and A. E. Tutton, phosphorous oxide, *TRANS.*, 545.
- Thoulet, J., solubility of some substances in sea water, 719.
- Thresh, J. C., a new method of estimating the oxygen dissolved in water, *TRANS.*, 185.
- estimation of ethyl nitrite in spirit of nitrous ether, 927.
- Thümmel, K., cattle marrow, 1172.
- Thümmel, K. See also Poleck.
- Thurnauer, G., preparation of aromatic thiocyanates, 749.

## T.

- Tiemann, F., action of acetaldehyde and of ethyl acetoacetate on benzylamidoxime, 44.  
 — amidoximes and azoximes, 41, 140, 141, 253.  
 Tiesler, W. See Kehrman.  
 Tigerstedt, A. See Bischoff.  
 Tilden, W. A., and C. R. Beck, crystallised substances obtained from the fruits of various species of *Citrus*, *TRANS.*, 323.  
 Tillmanns, H., anhydrides of the diphenylsuccinic acids, 1135.  
 Tingle, J. B., action of ethyl oxalate on camphor, *TRANS.*, 652.  
 Tingle, J. B. See also Perkin.  
 Tivoli, D., action of arseniuretted hydrogen on potassium permanganate, 1210.  
 Tobias, G., diazosulphonic acids, 1149.  
 Toerring, H. v., estimation of glycerol in wine and beer, 426.  
 Tollens, B. See Allen, Beythien, Bieler, Günther, Parcus.  
 Tompson, F. W. See O'Sullivan.  
 Trapesonjanz. See Bischoff.  
 Traube, H., pyrrargyrite from Kajénal, in Transylvania, 1070.  
 — syenites and hornblende-schists near Glatz, in Lower Silesia, 1076.  
 Traube, M., autoxidation, 208.  
 Traube, W., aromatic sulphonamic acids, 1137.  
 Traube-Mengarini, M., gases in the swimming bladder of fishes, 183.  
 Travali. See De Blasi.  
 Trillich, H., estimation of carbonic acid in potable waters containing magnesium, 197.  
 Trimble, H., and H. J. M. Schroeter, oil of camphor, 261.  
 — oils of wintergreen and of birch, 256.  
 Tröger, J. See Otto.  
 Tschirsch, estimation of chlorophyll in leaves and extracts, 672.  
 Türin, V. v., determination of the molecular weight of metals, 1046.  
 Turner, A. E. See Japp.  
 Tutton, A. E., crystallographical relations of the derivatives of dibenzoylcinnamene, *TRANS.*, 714.  
 Tutton, A. E. See also Thorpe.

## U.

- Udránszky, L. v. See Hinsberg.  
 Uhl, J., action of sulphurous anhydride on metals, 1371.  
 Uhlhorn, E., laurenes, 1248.

- Uhlhorn, E., propylxylenes, 1249.  
 Ulbricht, amount of substances yielding oil of mustard in various foods, and their action in the animal body, 539.  
 Ulfers, F. See Bistrzycki.  
 Ussing, N. V., minerals from Fisker-näs, in Greenland, 19.

## V.

- Valenta, E., apparatus for fractional distillation under reduced pressure, 556.  
 Van Bemmelen, J. M., causes of the fertility of the forest land of Deli (Sumatra) and Java for tobacco, and of the decrease of fertility, 1340.  
 — composition of soils, 1339.  
 — composition of the ash of tobacco 1338.  
 — composition of the sea mud in the new alluvia of the Zuider Zee, 822.  
 — composition of the volcanic soils of Deli and Malang and the clay soil of Rembang, 823.  
 — estimation of water, humus, sulphur, &c., in soils, 832.  
 Van Berchem, P., equilibrium in homogeneous solutions when unequally heated, 444.  
 Van der Waals, J. D., molecular theory of a substance formed from two different substances, 556.  
 Van Deventer, C. M., and L. T. Reicher, formation of salts in alcoholic solution, 553.  
 Van Deventer, C. M. See also Reicher.  
 Van Itallie, L., occurrence of iodine in *Fucus vesiculosus* and *Chondrus crispus*, 402.  
 Vanni, A. See Schiff.  
 Van Nüys, T. C., and R. E. Lyons, estimation of albumin in urine, 1199.  
 Van't Hoff, J. H., nature of osmotic pressure, 555.  
 — solid solutions and molecular weight determinations of solid substances, 1044.  
 Varda. See De Varda.  
 Varet, R., action of ammonia on the compounds of mercuric cyanide with metallic chlorides, 351.  
 — action of cupric salts on metallic cyanides, 464.  
 — ammoniomeric cyanides, 223.  
 — interaction of haloid salts of mercury and zinc, 224.  
 Vasey, S. A. See Mott.  
 Vasilieff, M. See Menschutkin.

- Vaubel, W., behaviour of sodium thiosulphate towards acids, 10.
- Veley, V. H., conditions of the reaction between copper and nitric acid, 701.
- Venator. See Isbert.
- Vernadsky, W., phosphorites from the government of Smolensk, 1071.
- production of sillimanite: constitution of porcelain, 1074.
- Vernon, H. M., action of hydrochloric acid on manganese dioxide. Manganese tetrachloride, *Proc.*, 1890, 58.
- Vèzes, M., potassium nitrosoplatinochloride, 709.
- Vèzes, M. See also Joly.
- Vighi, E. See Mazzara.
- Vignon, L., estimation of acetone in methyl alcohol and in the liquids used for methylating alcohol, 837.
- thermochemical properties of silk, 553.
- thermochemistry of wool and cotton, 939.
- water analysis, 667.
- Villard, hydrates of gases, 1386.
- hydrates of haloïd alkyl salts, 1386.
- Ville, G., influence of the composition of the soil on the physical properties of plants, 81.
- Ville, J., dihydroxyphosphinic acid and hydroxyphosphinous acid, 618.
- Vincent, C., action of lead oxide on toluene, 962.
- Vincent, C., and Delachanal, action of ammoniacal cupric oxide on carbon compounds, 21.
- hydrogenation of sorbin and oxidation of sorbite, 1389.
- sorbite, 21.
- Vis, G. N. See Claus.
- Vitali, D., action of sulphuric acid on the haloïd salts of the alkalis in presence of some metallic salts, 289.
- detection of mercuric cyanide in toxicological investigations, 198.
- Vizern, M., assay of commercial glycerol, 835.
- Vladesco, products of the distillation of wood, 956.
- Voelcker, J. A., experiments on ensilage, 286.
- Vogel, J. H., chemical composition of vesuvian, 221.
- Vogt, G., composition of clays and kaolins, 1060.
- rocks used in the manufacture of Chinese porcelain, 461.
- Voigt, A., volumetric estimation of zinc, 196.
- Voit, E. See Bischoff.
- Volhard, J., acetonediacetic or hydrochelicidonic acid, 30.
- crystalline mercury oxychloride and estimation of mercury, 565.
- preparation of oxygen in a Kipp's apparatus, 8.
- Volkoff, A., dehydration of monohydric alcohols, 354.
- Voltmer, L., action of hydroxylamine and its derivatives on the thiocarbimides, 1126.
- Vorce, L. D. See Burton.
- Vortmann, G., estimation of nitric acid by electrolysis, 1467.
- volumetric estimation of manganese, 1470.
- Vortmann, G., and O. Blasberg, cobaltocetamine salts, 14.
- Vortmann, G., and E. Borsbach, mercuricobaltammonium salts, 1377.
- Vortmann, G., and G. Magdeburg, action of sulphurous acid on cobaltammonium salts, 14.
- Vortmann, G., and E. Morgulis, mercuricobaltammonium salts, 13.
- Vortmann, G., and C. Padberg, action of sodium thiosulphate on metallic salts, 12.
- action of sulphur on solutions of metallic salts, 9.
- Vortmann, G. See also Messinger.
- Vulpinus, G., analysis of diuretin, 1475.

## W.

- Waals. See Van Der Waals.
- Wadsworth, G. H., action of aldehydes and ammonia on  $\alpha$ -diketones, *Trans.*, 8.
- Wadsworth, G. H. See also Japp.
- Wagner, G., camphene glycol and a tetrahydric alcohol from limonene, 1313.
- diallyl tetrabromides, 223.
- Wagner, J., viscosity of liquids, 441.
- Wahlberg, E., volumetric estimation of chromium in iron and steel, 85.
- Walden, P., and A. Kernbaum, isomerism in the stilbene group, 1299.
- Walden, P. See also Bischoff.
- Waldie, D., obituary notice of, *Trans.*, 456.
- Walker, J., analysis of organic substances containing copper, 296.
- determination of the affinity of organic bases, 5.
- solubility and heat of fusion, 686.
- Walker, J. See also Brown.

- Walker, T. S., clay coloured stools without jaundice, 397.
- Wallach, O., pinene, 1315.
- so-called massoyene, 1316.
- terpenes and ethereal oils, 1314.
- Wallach, O., and A. Otto, isomeride of camphor, 169.
- Waller, E., hardness of water, 86.
- purification of alcohol, 727.
- Walter, B., refractive indices of saline solutions, 202, 673.
- Warburg, E., fall of potential at the cathode in Geissler's tubes, 1035.
- theory of the voltaic cell and of galvanic polarisation, 314.
- Warder, R. B., dynamical theory of albuminoid ammonia, 87.
- Warren, H. N., crystalline metallic precipitates, 851.
- magnesium as a reagent, 195.
- preparation of the chlorides of silicon, aluminium, &c., 108.
- Warren, T. T. P. B., examination of oils, fats, &c., 1347.
- Warren, W. H. See Bentley.
- Watson, G., precipitation, 847.
- Watts, F., milk analysis, 929.
- Wegner, R., molecular refraction of the halogen salts of lithium, sodium, and potassium, 549.
- Wegscheider, R., impurities in commercial barium carbonate, 826.
- Wehmer, C., calcium oxalate in the leaves of *Alnus glutinosa*, *Symphoricarpos racemosa*, and *Crataegus oxyacantha*, 191.
- Weinschenck, E., mineral synthesis, 709.
- Weise, J., paranitrobenzenylamidoxime and paramethylorthonitrobenzenylamidoxime, 44.
- Weiske, H., and E. Flechsig, saving effect on albumin of organic acids in vegetable foods, 538.
- Weiss, J.,  $\alpha$ - and  $\beta$ -homobetaines, 747.
- Welter, A. See Claus.
- Welzel, A., detection of carbonic oxide hæmoglobin, 432.
- Welzel, O. See also Claus.
- Wender, V., conversion of ethyl acrylate into  $\beta$ -alanine, 862.
- $\epsilon$ -dinitrophenol, 751.
- trisubstituted derivatives of benzene, 884.
- Wenjukoff, P. N., sphærolite-tachylite from the Ussuri district, 461.
- Werner, detection of sugar in urine, 427.
- Werner, A., two stereochemically isomeric derivatives of furfuraldoxime, 1266.
- a second benzoïnoxime, 1264.
- Werner, A. See also Hantzsch.
- Werner, E. See Alexéeff.
- Werner, E. A., interaction of benzyl chloride and allyl bromide respectively with thiocarbamide, phenylthiocarbamide, and diphenylthiocarbamide, *TRANS.*, 283.
- Wershoven, F. J., electrical conductivity of solutions of cadmium salts, 1203.
- West, S., acetonuria and diabetic coma, 399.
- Wetzel, A., detection of carbonic oxide hæmoglobin, 1200.
- Wheeler, H. A., plattnerite from Idaho, 339.
- Whitfield, J. E., new meteorite from Mexico, 346.
- Wiborgh, J., volumetric estimation of carbon in iron, 924.
- Widman, O. See Söderbaum.
- Widmer, J., estimation of carbon in graphite, 923.
- Wiegmann, D. See Skrapup.
- Wiens, A., specific volume of some ethereal salts of the oxalic acid series, 102.
- Wiernik, T. See Lunge.
- Wijsman, H. P., jun., diastase considered as a mixture of maltase and dextrinase, 998.
- Wildermann, M., boiling points of substances are a function of their chemical nature, 941, 1364.
- Wiley, H. W., analyses of the seed of *Calycanthus glaucus*, 403.
- determination of molecular weights of substances from the boiling points of their solutions, 104.
- Wiley, H. W., and W. Maxwell, organic acids in the sorghum cane, 819.
- Will, W., and J. Pinnow, meteorite from Carcote, Chili, 462.
- Wille, N., gases contained in the bladders of *Fucus vesiculosus* and *Ozothellia nodosa*, 916.
- Willgerodt, C., arrangement of the atoms in space in compounds containing nitrogen, 576.
- azohydrazine and polyazo-compounds, 1118.
- geometrically isomeric nitrogen compounds, 1089.
- reduction of nitroazo-compounds by alcoholic ammonium sulphide, 1116.
- stereochemistry of nitrogen compounds, 951.
- symmetrical nitrophenylhydrazines of the aromatic series, 40.
- Willgerodt, C., and B. Hermann,

- derivatives of orthoparadinitrophenyl-phenylhydrazine, 1259.
- Willgerodt, C., and S. Schiff, acetonechloroform: chlorisobutyric chloride: ethylacetonechloroform, 959.
- Williams, G. H., celestine from Mineral Co., West Virginia, 1071.
- hornblende of St. Lawrence Co., New York, 1073.
- Williams, R., estimation of citric acid in lemon juice, 88.
- examination of commercial carbolic acid and of disinfectant powders made therefrom, 300.
- Maumene's test for essential oils, 834.
- reactions of essential oils, 199.
- Willson, R. W. See Peirce.
- Wilson, J. H., test for nitrous compounds in sulphuric acid, 922.
- Winkelmann, A., composition of the vapour of mixed liquids, 554.
- Winkler, C., reduction of oxygen compounds by magnesium, 331, 451, 693, 1372.
- Winogradski, the nitrifying organism, 1180.
- Winter, J., urobilin in the bile, 187.
- Winzer, H., ethyl camphorylmalonate, 1150.
- Wirtz, K., determination of the heat of vaporisation by means of the steam calorimeter, 1040.
- Wislicenus, W., action of bromine on ethyl oxalacetate, 133.
- Wislicenus, W., and K. Spiro, action of aniline on ethyl oxalacetate and ethyl methyl oxalacetate, 378.
- Witt, O. N., cyanamines, a new group of dyes, 1307.
- Witte, F. C. See Levy.
- Witter, H. See Buchner.
- Witz, A., influence of a magnetic field on the electrical resistance of gases, 1359.
- Wohl, A., carbohydrates, 1085.
- Wolfenden, R. N. See Martin.
- Wolff, H., phenylallenylamidoxime derivatives, 41.
- Woll, F. W., loss of nitrogen in acid fodders, 1339.
- Woodhead, T. S. See Irvine.
- Woodruff, T., preparation of aloin, 170.
- Wov, E. F. R., massoy bark oil, 638.
- Wright, A. E. See Külz.
- Wright, C. R. A., and C. Thompson, air batteries, 841.
- ternary alloys, 336.
- Würtz, O. See Claus.
- Wulf, H., petrography of South West Africa, 221.
- Wurm, A., benzenylazoximethenyl-carboxylic acid and its derivatives, 258.
- Wynne, W. P. See Armstrong.
- Wyrouboff, G., cerium hydrogen sulphate, 452.

## Y.

- Yeates, W. S., pseudomorphs of native copper after azurite, 453.
- Yeo, G., stability of oxyhæmoglobin, 1012.
- Younger, W., estimation of chlorine and hydrogen chloride in gases, 412.
- Yvon, reagents for  $\alpha$ - and  $\beta$ -naphthol, 927.

## Z.

- Zaertling, R., derivatives of nitro- $\beta$ -naphthaquinone, 509.
- Zaleski, S. S., macro- and micro-chemical iron reactions, 296.
- Zanetti, C. U., action of ethyl and propyl iodides on potassium pyrroline, 907.
- derivatives of alkylpyrrolines, 65.
- tertiary pyrroline derivatives, 1430.
- Zanetti, C. U. See also Ciamician.
- Zanner, A. See Fittig.
- Zatti, C., nitro-derivatives of the indoles, 897.
- Zatti, C., and A. Ferratini, acetyl-derivatives of indole, 988.
- — methyl derivatives of indole, 1292.
- — nitrosoindole, 1293.
- — synthesis of  $\beta$ -indolecarb-oxylic acid, 1293.
- Zatti, C. See also Ciamician.
- Zelinsky, N., ethyl methylenemalonate and its polymerides, 364.
- two isomeric symmetrical dimethyl-glutaric acids, 132.
- Zelinsky, N., and M. Feldmann, symmetrical diphenyltrimethylene cyanide and symmetrical diphenyl-glutaric acid, 384.
- Zelinsky, N. See Butchichin.
- Zeisel, S. See Herzig.
- Ziegler, A., analysis of ferro-aluminium and aluminium steel, 1471.
- estimation of tungsten in metallic tungsten, 420.
- Ziegler, J. H., preparation of aromatic sulphides and of thioxanthone, 1292.

- Ziegler, J. H., synthesis of tetraphenylthiophen, 1246.
- Zimmer, H., action of aldehydes on benzenylamidoxime, 253.
- Zincke, T., azo-derivatives of phenyl- $\beta$ -naphthylamine, 990.
- hexachlor- $\alpha$ -diketohexene, 964.
- Zincke, T., and C. Campbell, azimido-compounds, 787.
- Zincke, T., and T. Cooksey, tetrachloro- $\alpha$ -diketohydronaphthalene and its decomposition products: orthotrichloracrylbenzoic acid and phthalylchloracetic acid, 784.
- Zincke, T., and O. Kegel, action of bromine on phloroglucinol, 1108.
- Zincke, T., and O. Kegel, action of chlorine on phloroglucinol, 488.
- Zincke, T., and F. Küster, action of chlorine on catechol and orthamidophenol, 754, 1255.
- Zincke, T., and L. Schmunk, action of chlorine on quinonoximes, 1146.
- Zinkeisen, W., oxalenediamidoxime and oxaleneanilidoximamidoxime, 122.
- Zotta, V. v., zinc hydrosulphide, 214.
- Zulkowski, K. and K. Peters, orcein, 1405.
- Zuntz, N., and C. Lehmann, respiration in the horse during rest and work, 1170.
- Zuschlag, G. See Claus.
- Zuurdeeg, J. See Klinger.